LONDON TRAFFIC PROBLEMS.

By Colonel Sir Herbert Jekyll, K.C.M.G.

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WHEN the Institute honoured me with their invitation to address you on the subject of London Traffic I had some hesitation in accepting, owing to the difficulty of finding anything new to say. The whole subject was dealt with exhaustively by the Royal Commission, which reported in 1905, and since then the London Traffic Branch of the Board of Trade has, for six consecutive years, issued an Annual Report, the last of which appeared about a fortnight ago. There is, therefore, little or nothing to be said that has not been said before, and I cannot hope to do more than touch briefly upon some branches of the subject which appear to me to be of special importance at the present time. I propose to confine myself mainly to the time which has passed since 1901, when, as Railway Secretary of the Board of Trade, I first had to do with matters connected with London traffic; and to consider the changes that have taken place in that period, the forces which are still at work, and the direction in which they seem to point.

The amazing growth of traffic which has taken place in the course of the last few years may be illustrated best by figures. In the year 1892 the total number of journeys taken in Greater London on local railways, tramways, and omnibuses amounted to 562 millions; in 1902 the number had risen to 911 millions, and in 1912 it had reached the astounding total of 1,786 millions. In the first of these ten-year periods the increase had been 62 per cent., and in the second no less than 96 per cent. The figures, large as they are, do not represent the whole of the movement of passengers in public conveyances, as they take no account of cabs or of the suburban traffic of the trunk railways, for neither of which are figures available. A recent estimate puts the cab traffic at 50 millions, and the railway suburban traffic at 250 millions, so that the total number of journeys in public conveyances of all kinds must have been well over 2,000 millions in 1912. The increase cannot be accounted for by the growth of population, since the Census Returns show an increase of less than 17 per cent. between 1891 and 1901, and little more than 10 per cent. between 1901 and 1911. It is therefore evident that it is attributable to greater frequency of individual journeys, and this conclusion is borne out by the published figures, which show that the number of journeys per head of population advanced successively from 98 in 1892 to 136 in 1902, and to 244 in 1912. Adding the cab and suburban railway traffic, the number per head in 1912 cannot have been much less than 300.

I shall not have to trouble you with many more figures, because statistics of London traffic

are given in the Report of the Royal Commission, and, for later years, in the Annual Reports of the London Traffic Branch, where any who are interested in the subject will find them set out in full detail.

It is worth while, at the outset, to glance at the growth of London in modern times. In the early part of the nineteenth century the population increased slowly. The capacity of roads and waterways to supply the inhabitants of a small area with the necessaries of life is limited, and, with the slow means of conveyance then existing, the limit had almost been reached. All that could be done was to improve the roads and provide additional bridges, and the numerous Acts of Parliament relating to roads in and about London point to the national importance that was then attached to them as a system, apart from the roads of the country at large. It is significant that, at this time, the efforts of the Legislature were directed to bringing the whole of the main roads, in what is now known as Greater London, under the control of a single body, and this desirable measure was on the point of being carried into effect when the whole aspect of the question was altered by the introduction of railways. Attention was at once diverted from the roads, which became of less and less importance as the railway system developed, with the result that they were left to the divided control of local authorities, under which they remain to the present time. London grew apace as soon as the railways had become firmly established. They provided the means of sustaining a larger population by drawing upon the resources of the whole country: they induced people to come to London by the facility which they offered for movement to and fro; and in course of time they developed the latent possibilities of the suburbs as places of residence by making them easy of access from the centre. Without railways London could never have reached its present size, and it is not too much to say that modern London owes its creation to them. It is true that wealthy people were able to live at some distance from the centre of the City—witness the fine old houses which still exist in such places as Clapham, Dulwich, Roehampton, and Hampstead; but even 100 years ago it was not uncommon for the City magnate to live over his counting-house, and in any case a suburban residence was the luxury of the few, while the bulk of the population had to live, not only in London, but in close proximity to their work. While the development of Outer London, which began to take effect about the middle of the last century, was the work of the railways, internal communication continued to advance up to the end by the gradual improvement of the old horse vehicles, and the addition of underground railways, steamboats, and tramways. Large areas both within and without what is now the County of London were covered with houses, and, to all appearance, expansion might go on indefinitely. Unhappily the new areas were not developed in conformity with any general plan, and the old evil of unregulated expansion, which lies at the root of the traffic problem, was allowed to go on unchecked. Had the difficulties which beset the question been foreseen, as they might well have been, and had timely provision been made for the needs of the future during a period of great building activity, the problem which confronts us now would have been comparatively easy to solve.

The conditions which prevailed fourteen years ago are well within the recollection of most of us. The suburban traffic was practically a monopoly of the railways; and internal communication was provided for by horse-drawn cabs, omnibuses, and a few tramways, in addition to the Metropolitan and District Railways worked by steam, with trains neither numerous nor fast, pervaded with dirt and poisonous fumes, and the two earliest electric railways, the City and South London and the Waterloo and City. The beginning of the present century was to see the commencement of a new era in traffic. The Central London Railway, which had been opened in 1900, was quickly followed by other tube railways; the Metropolitan and District lines were converted from steam to electricity; horse tramways were electrified, and the whole

tramway system both within and without the County of London was extended; while mechanical omnibuses and cabs took the place of the old horse vehicles. These and other changes, accompanied as they were by services greatly improved in convenience, frequency, and speed, and by a general lowering of fares, brought about a complete revolution in the conditions of traffic, and account fully for the unprecedented increase to which I have already referred as having taken place in the course of the last ten or twelve years. The public are not slow to take advantage of improved facilities, and these are now so good that in no city in the world is travelling so comfortable, speedy, and cheap as it is in London, while the annual saving in the time of the community, if it could be stated in terms of money, would be found to amount to an enormous sum. Meanwhile large incursions were made into the suburban preserves of the trunk railways, and tramway and omnibus routes have been lengthened to such an extent that not only has the number of passenger journeys doubled in little more than ten years, but their average length has increased considerably, while many new routes, formerly untraversed by public conveyances, have been opened for traffic. One of the results of all this may be seen in the activity of building operations in parts of the Metropolitan area which had not previously been available for residential purposes owing to the lack of convenient access.

It was not to be expected that changes of such magnitude as those to which I have alluded could be accomplished without much disturbance and injury to pre-existing interests. Omnibuses lost much of their traffic to the underground railways and to the tramways, which, indeed, swept them out of South London; the trunk railways lost millions of passengers every year to the tramways; horse cabs were driven out by the more efficient mechanical cabs; the old underground railways suffered from the competition of the newer tubes; and every change in any part of the whole transportation system affected every other part in a greater or less degree. Latterly the changes have been in the opposite direction. The tramways, which at one time carried everything before them, have, in their turn, begun to suffer; omnibuses, which had been brought to the verge of ruin, have regained much of their former prosperity; and one railway company has recovered its suburban traffic by substituting electric for steam working, while others, encouraged by its example, are preparing to follow suit. The public is the final arbiter in the competition between rivals, and naturally gives the preference to the particular kind of conveyance which happens to suit it best. The gain of one is, however, not always the loss of others, since every improvement in facilities creates new traffic, and the total volume, so far from being a fixed quantity, is constantly growing. The change which has taken place in London travelling has not been confined to improvement in the instruments of locomotion; improvements equally great have been made in organisation and administration. A few years ago there was fierce competition not only as between railways, tramways, and omnibuses, but even among themselves. Up to a certain point the public benefit by competition, but when competition and the cutting of fares has been carried so far that the whole industry of transportation becomes unproductive, enterprise is checked, and the community lose the benefit of extended facilities which they might enjoy could such extensions be provided without loss. This is what actually happened; the benefit of cheap travelling was being purchased at too high a price, enterprise was discouraged, railways ceased to be constructed, and had this state of things continued the public must have suffered either by the curtailment of facilities or by a general increase of fares, since transportation can no more be carried on at a loss than any other business. Attempts to bring about co-operation among the various competing agencies met with very limited success, and it soon became evident that the only real remedy was an amalgamation of interests, which would put an end to the disastrous competition which had hitherto prevailed. The policy of amalgamation, which began in a small way among the omnibus companies, has happily been carried into effect, to the greater advantage of the

travelling public, and also of the whole traffic of London. The improvement is especially marked in the service of omnibuses, for so long as a number of independent companies were competing with each other for the same traffic they were all compelled to confine their operations to comparatively few remunerative routes, upon which more vehicles were run than were really required, while none could afford to provide services which did not promise an immediate return. Now that the whole have been brought under common control superfluous omnibuses have been suppressed, there being no inducement to run more than are actually wanted, and the congestion of busy routes has thereby been relieved, while it has been possible to extend the field of operation very largely, and to open up new districts hitherto served imperfectly or not at all. It has further become possible to co-ordinate the various forms of transportation. In a city as large as London there is room for every kind of conveyance, but it is not desirable that all should compete for the same traffic over the whole area. Such unrestricted competition leads to needless duplication and loss to all. Railways, tramways, and omnibuses all have parts of their own to play, and although overlapping cannot be avoided, the aim should be to confine each, as far as possible, to its own peculiar field. Generally speaking, railways are the best for carrying large numbers at high speed for long distances, tramways for dealing with heavy suburban traffic, and omnibuses for light suburban and pick-up traffic. In all large cities there are two kinds of passenger traffic—one comprising short journeys between different points, and the other comprising journeys between the centre and the residential suburbs, the difference between them being that the first is continuous throughout the day and far into the night, while the second is intermittent and restricted to comparatively short periods in the morning and evening. Outside the nearer suburbs which are served by all three this morning and evening traffic is the peculiar province of the railways, since no other kind of conveyance can rival them in point of speed. People who come up to London every day measure distance by time and not by miles. The number of those who are willing to undertake two daily journeys of anything up to an hour is increasing every year, and the further they can be carried in the time the further they will go. The railway companies are alive to the importance of catering for a class which yields them a steady revenue from season tickets; they have already done much to improve the outer suburban service, and it is probable that further developments will take place in this direction in the near future. The large companies are less favourably placed for serving the nearer suburbs, partly because they are exposed to competition, and partly because the heavy suburban traffic tends to block the terminal sections, and thereby to impede the arrival of trains coming from greater distances. Moreover, the railway termini are not always the points to which passengers want to go, though this drawback is now met to a great extent by the underground railways, which serve to distribute them to their ultimate destinations. Though naturally reluctant to give up any portion of a traffic which they have built up at great cost in the provision of stations and other works, it would not be surprising if they should find it to their advantage to curtail facilities for short journeys and to concentrate their energies on the wider field in which their supremacy is unchallengeable. The directions in which improvements are to be looked for are the separation of suburban from long-distance traffic, the electrification of suburban lines, the shortening of journey times, the increase of accommodation in the rush hours, and the extension of urban railways into rural districts. Such changes would be of special interest to architects, inasmuch as they could not fail to stimulate building in the outer suburban area.

In regard to internal communication, where there must always be competition, there is little difference in respect of fares, and, apart from individual preferences for particular kinds of conveyance, the main consideration is time. The effect of weather is not inconsiderable, but, as a rule, people will take the most expeditious means of getting to their destinations.

For the longer distances the electric railways have a decided advantage in this respect, and the interchange of traffic among them has been so improved that it is possible to travel all over London with surprising rapidity. It is much to be regretted that the underground railways were promoted as separate undertakings. Much has been done to improve their inter-working, and further improvements may yet be made; but had they all been designed from the first as one system, like the underground railways of Paris, better arrangements might have been made for the interchange of traffic, and vast sums of money, spent in promotion and construction, might have been saved.

One of the greatest benefits which underground railways confer upon the community is the relief which they afford to the overburdened streets. It is not so much that the volume of surface traffic is any less than it was—on the contrary, it is increasing from year to year, even in streets like Oxford Street and Holborn, which are immediately over the Central London Railway—as that, could such a thing be imagined as a suspension of underground traffic, congestion would become intolerable, as it would entail the addition of at least half a million a day to the number of people using the main thoroughfares. It follows that the real effect of underground railways is not so much to diminish the traffic in the streets as to permit the movement of millions of people, who without them would not be able to move at all. In some respects underground railways actually increase the number of people in the streets owing to the facility of access which they afford to the centre from the surrounding suburbs. It has become so easy to reach the principal commercial districts that many who formerly depended upon shops in their own neighbourhoods now do their business in the centre of London; so that, while the population itself tends to move outwards, the tendency of commerce is to become more and more concentrated in the centre. For this reason the conversion of residential into business premises, which has already made considerable progress, is likely to continue, if not to increase.

I do not propose to discuss the relative merits of tramways and omnibuses, which have been the subject of acute and heated controversy. In my opinion there is room for both. The tramways of London have been of inestimable benefit, especially to the poorer part of the community, in promoting the outward movement of the population, contributing thereby to the solution of the housing problem; but it does not seem probable that any material addition will be made to their existing mileage in present circumstances. They would be of still greater utility if they could be worked under conditions approaching more closely to those of railways: but this could not be done in the central area without street widenings on a scale sufficient to give them tracks of their own independent of the ordinary road traffic.

The question of housing is bound up inseparably with transport. So long as locomotion was slow and dear the population was necessarily concentrated, and this concentration resulted in overcrowding, bad and insanitary dwellings, and the innumerable evils which these conditions entail. This has all been changed by the recent improvements in the means of locomotion, one of the principal effects of which has been to enlarge the area available for the housing of the people. They are no longer compelled to herd together in a limited space. Better houses at lower rents and in healthier surroundings are now open to those who previously had no choice, and among other advantages conferred by cheap and rapid transport working people can now enjoy the benefit of fixed homes instead of having to follow their work from one part of London to another.

The movement of population outwards from the centre which has taken place in the last ten or twelve years is attributable directly to the increase of facilities for movement which has occurred in the same period. It is clearly reflected in the returns of the last Census which, for the first time in more than a century, show an actual decrease in the population of the County of London, accompanied by an enormous growth in the population of the Outer Ring.

We are still only at the beginning of this shifting of population, but there is every reason to hope that it will continue at an accelerating rate as the people come to realise the advantages which are now within their reach. The movement, caused in the first instance by better communication, further increases the demand for the latter. They act and react upon each other, since the more and the further people move outwards the greater becomes the need for means of locomotion. To take a single instance, the extraordinary development that has taken place in the neighbourhood of Golder's Green is entirely due to the Charing Cross and Hampstead Railway, and could not have occurred without it. This is only one out of many, for the same thing is happening in other directions, not only in the immediate neighbourhood of London, but in places as far distant as Southend, where the growth of population has been phenomenal owing to the enterprise of the Tilbury Railway in providing a service of trains suitable to the requirements of business men. The only limit to such expansion is the capacity of the railway to carry the people. A point which should not be overlooked in this connection is the necessity for preserving open spaces in localities which are becoming rapidly developed. The greatest care should be taken to avoid building up new areas in such a way as to reproduce, even approximately, the horrors of the slums. The example of the Essex boroughs is one to be avoided, and although the Building Acts and By-laws are sufficient to prevent a repetition of the worst evils with which we are too familiar, something more is required, and wherever building is active steps ought to be taken, while there is yet time, to secure the maintenance of open spaces of large extent.

So far I have confined my remarks to matters connected with the movement of people. I now add a few words on the no less important movement of goods. Here there are no statistics to guide us, and there are no means of ascertaining what changes have taken place in recent years. There is, however, no reason to suppose that goods traffic has increased to anything like the same extent as passenger traffic. In some respects it has diminished, as, for instance, in such articles as forage and manure, of which much less is carted through the streets now than ten years ago. In central London it is probable that the cartage of building materials has diminished, while that of shop goods has increased. Goods traffic is slower than passenger traffic, and is, consequently, more obstructive, though some of the lighter classes of goods are now conveyed in motor vehicles, and the use of such vehicles is increasing. This is all to the good, since it is the heavy slow traffic which makes the difficulty, added to the obstruction caused by vehicles waiting to be loaded and unloaded. Prominent among many suggestions which have been made for relieving the streets by reducing the volume of carted goods is one for the establishment of a central station or clearing house, connected with all the railways, where goods of all descriptions could be received, sorted, and despatched. The project appears to have been worked out in great detail, and if the merits claimed for it are capable of being realised the promoters ought to have no difficulty in obtaining statutory powers and the large amount of capital required to carry it into effect. It is, however, a question for experts, and I am not aware that any expert in the handling of goods traffic has pronounced in its favour. It is understood that the Post Office are about to construct an underground railway for the conveyance of parcels and mails between some of the principal offices and railway stations. The removal of mail vans from the streets will be a sensible relief, and the project may serve as an object-lesson which might lead to further enterprise in the same direction.

I now come to a part of the subject which is perhaps of more importance than any other at the present time—namely, the Roads. Nine years ago the Royal Commission pointed out that the main cause of the difficulty of the London traffic problem was the narrowness of the streets and the fact that they were not laid out on any plan. London having been allowed to grow without regulation or thought for the future. It is needless to labour the point, because the

fact is universally admitted, and it only remains to consider what can be done to remedy the defect. For this purpose it is convenient to deal separately with central and outer London, since the conditions which apply to the two areas differ materially. In the centre, comprising the greater part of the County of London, the ground has been built upon so closely that nothing can be done short of widening existing streets or making new ones. The cost of such operations would be so large that they could only be carried out by persistent effort spread over a long series of years, and in order that they should have the best effect it is essential that they should conform to a definite plan, laid down in advance, and worked up to by degrees. Much has already been done towards the widening and making of streets by the London County Council, their predecessors, the Metropolitan Board of Works, the Corporation of the City, the Metropolitan Borough Councils, and private landowners, including the Crown, whose contributions towards the improvement of communication have hardly received sufficient acknowledgment; but so far all improvements have been isolated and fragmentary, designed to meet pressure at particular points rather than to form parts of a general scheme. In this respect London stands alone, for in all other great cities where the same difficulty has arisen through traffic outgrowing the capacity of the streets the first step towards improvement has always been to prepare a plan. It is characteristic of the national temperament that we should proceed from hand to mouth instead of taking a long view of the situation. It was in this way that London grew up, and it is largely to this haphazard procedure that the difficulties which now confront us are attributable.

Of the two methods of effecting improvement, the construction of new streets is generally preferable to the widening of old ones. Both operations are costly; but the former causes less interference with traffic, and gives greater relief in the end by providing alternative routes; it also permits the construction of underground subways for pipes and wires, and even for the passage of tramcars, which are most difficult to make in old streets owing to the network of obstructions which are always found in such situations. It is not, however, desirable to undertake the construction of any great length of new street at one time, as it takes many years for a new street of considerable length to fill up, and in the meantime the capital cost of the site is lying idle, whereas short lengths are apt to be built up more quickly.

Additional and wider bridges are also one of the pressing requirements at the present time, in particular a road bridge with approaches to connect Charing Cross with St. George's Circus—two out of the three greatest traffic centres in London; and a new bridge to take the place of Lambeth Bridge, which, though still standing, has been condemned as unsafe for anything but pedestrians. If such a bridge were built, and continued by a new street to the neighbourhood of Victoria Station, it would relieve Victoria Street and Westminster Bridge, and would give direct access from Pimlico to the City by way of the new bridges which the Corporation are about to construct. The whole subject is one of especial interest to architects, inasmuch as there can be no greater ornament to a city than a fine bridge. The design of such structures has come to be regarded as the almost exclusive concern of engineers, though an architect may be called in to invest it with some degree of artistic merit, which, of course, is a hopeless task. I venture to think that the process should be reversed, and the design left to the architect, with such assistance as he may require from the engineer. It is not often that the qualifications of both professions are to be found in combination as they were in the person of Sir Christopher Wren, and it is tantalising to think what a monument we might have had if it had fallen to his lot to design a great bridge.

Necessary as it is to widen the principal thoroughfares or to add to their number, something might be done, at comparatively small expense, to increase their capacity. If a careful survey were made of each street it would often be found that obstructions might be

removed, that the widths of carriage-way and foot-ways might be readjusted, and that a number of improvements might be made which, though small in themselves, would, when taken together, make an appreciable addition to its effective capacity. The greatest of all obstructions are the centre lamp-posts which extend throughout the whole length of some of the busiest thoroughfares. They are even more pernicious than they appear to be, for, although not wide, there is always a margin on each side within which no vehicle will pass, while the intervals between them are so short that little use can be made of the spaces between them. These are often occupied by cab ranks, so that practically a strip in the centre of the roadway is thrown out of use, and the remainder is divided into two. It is sometimes claimed as an advantage that there should be a physical separation of traffic passing in opposite directions, and there would be force in the argument if the up and down traffic were equal in volume. This, however, is not the case, since the up traffic is heavier than the down at one time of the day and lighter at another, so that one side is nearly always more congested than the other. If the centre standards were removed a substantial addition would be made to the width of the roadway, the varying volumes of up and down traffic would adjust themselves to the width of the road, and fast vehicles would have less difficulty in passing the slow. Their retention is the less excusable, because the advantages of central lighting can be had without them. In the City and in foreign towns—especially Berlin—the lamps are suspended from the sides of the streets, and there is no apparent reason why the same thing should not be done elsewhere, provided that the width is not too great.

While the greatest need of central London is increased width of the principal thoroughfares, it is to be observed that the mischief is done, and that it can only be cured by a slow and costly process. In outer London, on the other hand, the mischief has not gone so far, but it is growing rapidly, and we may see to-day with our own eyes the progress of the very same evil which has been the cause of all our difficulties, leading inevitably to the same result, and laying up untold expense for future generations. It is surely incumbent upon us to take warning from the experience of the past, and to take steps, while there is still time, to arrest the mischief which is going on, and so to avert the recurrence of difficulties which are bound to come if matters are suffered to drift. The first step is to ascertain what amount of road accommodation is required, and what are the best lines for such new roads as may be needed. I would observe here that the number of main roads leading into London is too small, having regard to its great size. Paris, with a population only half as large as that of London, has twice as many outlets, which it owes to the wise forethought of the French Government. More than a century ago a plan was adopted for the expansion of the city, drawn up by a Commission which included architects and other artists among its members, and this plan, modified from time to time, in accordance with changing conditions, has been adhered to ever since. The outlets of London are not only too few in number, they are for the most part too narrow as well. They are, in point of fact, the roads which have existed for centuries, and no material addition to them has been made for more than eighty years. The making of new roads is beset with difficulty, because so much of the ground has been occupied by buildings, railways, waterworks, and other obstacles that the discovery of a new line of approach is no easy task. It is comparatively simple to ascertain the general line which a new road ought to take, having regard to the volume of traffic seeking an outlet in a particular direction: but it is a matter of the utmost difficulty to fix its precise location when the matter comes to be dealt with in detail, with due consideration for topographical features and obstacles of different kinds. The Ordnance Maps can be used to a large extent, but they require constant revision, and the final working out can only be done upon the ground. Colonel Hellard, who has been engaged upon this work for the last three years, has examined the whole of the ground with the greatest assiduity and patience,

and has produced the plan which is now exhibited to you. The new roads shown upon this plan represent the least that will be required both to afford reasonably free communication between London and the surrounding districts, and to furnish proper access to localities suitable for development as building areas. The proposed roads are of three kinds—(1) radiating main roads, (2) encircling roads connecting with (1) and making it possible to pass through London without traversing the crowded centre, and (3) by-pass roads, avoiding certain places where traffic is abnormally congested. The aggregate length of proposed new roads is 117 miles, which, with the addition of 32 miles of existing roads, widened and improved, makes a total of 149 miles. The cost of all this will not be small, but these or similar roads will have to be made sooner or later, and it is certain that the longer their construction is deferred the costlier they will be. There is no necessity for making them all at the same time, but it is most desirable that steps should be taken to acquire land before it is developed, so that the additional cost of purchasing and removing buildings may not have to be incurred.

Main roads should not be less than 100 feet wide—a width which has been adopted as the standard for new roads in the neighbourhood of Liverpool. In fixing this width it is not intended that the whole of it should be brought into use at once, but that no building should be allowed within 50 feet of the centre-line. When a new road is first laid out a metalled roadway of from 20 to 25 feet would generally be sufficient, but there must be room for widening to meet the growing requirements of traffic. Where the land is still open and could be purchased cheaply it would be desirable to secure a still greater width, so that it may be possible to plant avenues of trees. The cost of land in open country is not a heavy item, and it would be well worth while in such situations to seize the opportunity of making the approaches to London dignified and pleasant. If the width of new roads—especially such as radiate from the centre—were sufficient to admit of light railways on tracks of their own, apart from the roadway for ordinary traffic, such railways would assist materially in developing building areas, provided that the stopping places were far enough apart to admit of a high rate of speed. By this means passengers could be brought rapidly towards the centre, and could be distributed to their destinations from convenient points by any available means. It is desirable to have a number of independent radiating railways, because no one line can carry more than a limited number of people in the rush hours, and the difficulty of providing terminal accommodation becomes serious when the numbers to be dealt with are large.

In addition to the reasons already given for increasing the road accommodation in the outer Metropolitan district, there are two considerations which have an important bearing on the subject—namely, the growing use of roads by mechanical vehicles, and the action of local authorities under the Housing and Town Planning Act.

The number of motor vehicles is increasing rapidly, improvements and new inventions continue to be made, and additional uses continue to be found for mechanical transport of all descriptions. It is difficult to foresee where the movement will end, but it is clear that the use of the roads both for passengers and goods, which has increased so much in the last few years, is likely to increase much more in the near future. Simultaneously with this development of road traffic has come the improvement of the roads themselves. Year by year the roads are becoming better in every respect, and more suited to carry both heavy and light traffic. There can be no doubt that they are destined to play a far more important part in the economic life of the country than they have filled at any time since the introduction of railways.

The Town Planning Act has not been long enough in operation to allow of much progress beyond the preliminary stages; but a number of schemes are under consideration in the Metropolitan area, and some are approaching maturity. It is of the utmost importance that these schemes should include due provision for arterial roads before the plans are finally settled.

If each district lays out its roads independently, with no regard for anything but its own convenience, not only will nothing be done towards providing arterial roads, but the construction of the latter will become much more difficult. What is required is a central authority, with power first to lay down the lines of arterial roads, and, secondly, to require local authorities to make their schemes conform to prescribed lines which happen to traverse their areas. There is no reason to believe that such a measure of control would inflict any hardship upon the authorities concerned; on the contrary, by giving them all good communication with the centre of London it would prove the most effectual way of promoting their prosperity. They will have to make roads, in any case, and if some of these are laid out so as to form sections of arterial communication they will serve a double purpose. It is understood that the President of the Local Government Board is giving attention to this subject, and is endeavouring to bring about a common understanding by means of conferences of local authorities. It is to be hoped that voluntary action on the part of the authorities will lead to the desired result, and it is satisfactory to know that the matter is receiving attention and is in such good hands. It signifies little by what means the object is attained, whether by the creation of a central authority appointed *ad hoc*, or by the action of a Department of State. The important thing is that by voluntary agreement, if possible, or, in the last resort, by some measure of compulsion, the benefit of arterial roads should be obtained for the community at large. It must be a matter of satisfaction to the members of this Institute to know that they have taken an active part in impressing this important point upon his Majesty's Government.

There are many other topics on which I might have touched, but London Traffic is so large and intricate a subject that it is not possible to deal with all its ramifications in a reasonable length of time.

DISCUSSION.

The President, Mr. Reginald Blomfield, A.R.A., in the Chair.

Colonel R. C. HELLARD, C.B., Head of the London Traffic Branch of the Board of Trade: I am glad to be called upon to move a vote of thanks to the Lecturer, for two reasons. One is a personal one, for when Sir Herbert Jekyll was my Chief, I always received every consideration and encouragement at his hands. The other is on the more general ground that some time after the Report of the Royal Commission on London Traffic had been issued, and enthusiasm on the subject of improvement of roads had begun to flag, we owe it to Sir Herbert that interest was once more thoroughly aroused in the matter. As regards the improvement of roads, it should be remembered that the road is in a totally different position from the railway. For the railway the money will always be forthcoming, so long as there is a chance of any return: it is a commercial enterprise which will pay. The road, on the other hand, is severely handicapped, for whoever provides the money for it must look for a poor return: it is almost a philanthropic business, for the benefit of others. This financial difficulty must be faced in course of time, and meanwhile you cannot keep this subject of the improvement of roads too much before the public.

Mr. RAYMOND UNWIN [*F.*]: It gives me very great pleasure to say a few words in seconding this vote of thanks—which I am sure will be a very hearty one—to Sir Herbert Jekyll, not only for his Paper to-night, but for the work he has done in bringing this important matter forward, and keeping it to the front at a time when it was liable to drop into the background after the excitement of the Royal Commission. As Sir Herbert has said, this subject is not new, and it is difficult to say anything new about it. I can only add a few points in illustration of those which Sir Herbert Jekyll has selected as most urgently needing consideration. It is the experience of those who have studied cities in this country and abroad, that there is a definite movement towards the concentration of business, which leads to commercial efficiency, in the centre of the town, and towards the distribution of the people and the homes of the people, which leads to physical efficiency, in the outskirts of the town. And that is creating more or less of a change in the character of towns, and is affecting, and being affected by, the character of transit. As Sir Herbert very aptly pointed out, the distribution of the people in this way depends entirely on transit, and the limits depend on the time taken in going to and fro between home and work. Sir Herbert has spoken of some of the detailed ways in which roads might be made more efficient. I think that perhaps a little more attention might be given to the amount of useless traffic in the streets, both passenger and goods traffic.

Paddington, for instance, is four miles from Liverpool Street as the crow flies; King's Cross and St. Pancras are about two miles from Waterloo; yet the interchange of traffic between such stations by means of 'buses and cabs is very great, and leads to unnecessary congestion. The distribution of goods by rail is vastly cheaper than their distribution by road. At the present moment there is an inquiry going on in Chicago in connection with their railway termini and the re-arrangement of the railways. They can bring a ton of coals four hundred miles into the terminal for one dollar, yet it costs half-a-dollar to cart that ton an average of one mile to the consumer. Vast sums could be saved if goods could be brought nearer in the first instance. It has been calculated in Boston—and they go into these things carefully in American cities—that six million ton-miles per annum of carriage through the streets could be saved if all goods were delivered from the nearest terminal to the point they had to go to, *i.e.* if there was no cross delivery. That means, in money, £300,000—probably £500,000; it means 2,000 one-ton carts travelling ten miles each day uselessly in Boston. In London we have Covent Garden Market without communication either by rail or water; carting through the streets is the only means of transit. Coming to passenger traffic, it is cheaper to carry passengers express than by slow train. That has been proved, for instance, in the New York Underground, where they have express lines and slow lines parallel. They have worked it out so nearly that they find express trains are used and are efficient in the proportion of five to three for the slow trains. In order to remedy this, in the new line they are putting express stations further apart, so as to get a ratio of five to five in the two cases. London is the greatest city, but it is by no means the worst congested; the congestion in many other cities, notably New York, is greater. The Woolworth Building in New York, if it were to be emptied at once, would require thirty minutes for ten-car expresses running as fast as they could—that is, at $1\frac{3}{4}$-minute intervals—to take away all the people from that building. Sir Herbert mentioned the great advantage we have in London through the removal of competition between the different 'bus companies, and I think we should have a still greater advantage if all the different kinds of traffic could be co-ordinated: so that the railways should carry, as Sir Herbert said, long-distance traffic, the trams the nearer suburban traffic, and the 'buses effect the detailed distribution of the street traffic. I was very pleased that Sir Herbert did not join in the somewhat thoughtless disparagement of the street railway or tram that has prevailed lately. I am afraid some Londoners are very provincial in their ideas! If they were to see the great cities of the world, and the degree to which they depend on street railways, running on roads which have been properly planned for them, often quietly and inexpensively on grass, long distances without a stop because the intermediate roads are properly planned, they would not so lightly think that the 'bus was going to oust the tram. In the joint conferences of the local authorities which Mr. Burns has set up, we hope to see the beginning of the co-ordination of the whole traffic of London.

In making new main roads I would urge that we should not be too niggardly in regard to width. We have seen in the papers recently—I do not know whether it is true—that the Government are using pressure to prevent roads being made wider than 80 feet. Eighty feet is not enough to provide a central track for trams and tracks on each side, even for two up and down lines of vehicles, and we have now three definite speeds of vehicles—the slow horse, the trotting horse, and the fast motor. We need at least 86 feet to accommodate two lines of vehicles, and 98 feet as a minimum to give three lines each side of a central track for the street railway. And if you are to have room for tree-planting at intervals, you need 112 and 124 feet respectively. When you make a main road 120 feet wide instead of 80, in open land where you have not to clear away buildings, you are not destroying building land; you merely put your buildings 20 feet further back; economically, it is merely so much more agricultural land taken away from the margin outside London. Surely we can afford to make our few main roads in those cases of adequate width; there is not much danger of our going to the extravagant degree of general width to be seen in some Continental towns.

Roads are the corridors of our cities; they need planning and grouping, and dignified architectural treatment. And it is here that they interest the architect, not only because of the buildings which will grow up along them; the open spaces are our gardens, we need to have them disposed in an orderly way in connection with our roads. A city is a great organic unit, and we need a central authority, a head, thinking for the whole of that unit. And that is the power that we wish to see set up—a body able to co-ordinate the different influences and local authorities which are working each at some part or in some district. And such a body must have a plan as a guide. When we have secured these which Sir Herbert has so ably outlined for us, we shall have a basis for a fine development of London. I have great pleasure in seconding the vote, and in expressing our thanks as an Institute for the courtesy which has always been shown to us by Sir Herbert Jekyll and Colonel Hellard when we have approached them; and as a Town Planning Committee we have given them no small trouble in connection with our consideration of some of the roads shown on their map. We owe to Sir Herbert Jekyll and Colonel Hellard this bit of central thinking for London; it is the first bit of comprehensive thinking on the main roads of which we have had evidence; and

the Institute is especially grateful to them for this piece of work.

MR. SYDNEY PERKS, F.S.A. [*F.*]: We are all deeply indebted to the Lecturer for the way in which he has dealt with nearly every kind of traffic in London—horse traffic, passenger traffic, and goods traffic; the electric trams, the motor-'buses, and the railways above and below the street. But there is one section of the traffic, and a very important one, which he has not touched upon at all, viz., the pedestrian traffic. It is a great benefit to us to travel quickly, but I doubt if many people realise the price the public pays for these increased facilities. I have here the Report of the Select Committee on Motor Traffic, ordered by the House of Commons to be printed and issued in August last year, and this is taken from it: "The number of fatal street accidents in the Metropolitan Police Area has multiplied three-fold in eight years. In 1904 there were 155 deaths, and in 1912, 537. The number of injured was doubled in the same period. In 1904, 10,384, and in 1912 over 20,166 people were injured in the streets." That is outside the City area. I am glad to be able to say that accidents and deaths have decreased in the City of London, for in 1907 there were five killed and 1,221 injured; and in 1912 the number fell to three killed and 588 injured. These figures show that the traffic is slower in the City, where there is so much congestion, and that the number of accidents has not increased according to the population; the danger zone is outside the City, where the speed is much greater. The Lecturer deprecated the refuges and the lights along the centre of the streets; but I think they are the very things we want. Anybody who doubts it should try to cross Piccadilly, in the dip, about 11.30 at night, when the cabs are going West from the theatres. It will take some time, and he will realise the wisdom of the little girl who was asked at Sunday School the difference between the quick and the dead, when she said, "The quick are those who get out of the way of motor cars"! I think the authorities are realising the great danger to the public. There should be more refuges in the West End. I was glad to see, on turning over the Report of the Traffic Commission, in paragraph 30: "Sir William Nott Bower reported that a ready response was made in the City to any request for refuges to be fixed, and the police found them most valuable for the safety of pedestrians, and for keeping vehicular traffic in proper lines." And the following is very important: "Your Committee are of opinion that street refuges are of very great service in ensuring the safety of pedestrians, and a useful means of diverting the currents of vehicular traffic." I think they are most useful, and when you have them you can do your lighting from them, which in a wide street is far preferable to slinging wires across and fixing them sometimes to old buildings. The perspective as you look down Cheapside with the mass of wires along the street is not so pleasing as with standards placed along the centre. There is another point I would touch on. People often say in the City and West End, "Pull this building down and put the space into the traffic area," irrespective of whether it is wanted or not. But they do not realise how the ratepayer is hit by some of these improvements. He is hit in four ways. Imagine an important block of property in the City or the West End, the owners contributing largely to the rates. As soon as that block is demolished, the burden of rates which it used to bear has to be borne by all the owners in the district. Then there is the cost of acquisition: this is a heavy item, and has to be borne by the ratepayers. And when the site has been cleared, there is the cost of laying it out, which may be very great. Finally, there is the cost of maintenance of the open space, which is often considerable. All this is so obvious, yet it is often overlooked. Architects, too, have sometimes most ridiculous ideas. One architect said, "You know, St. Paul's Cathedral cannot be seen." I said, "No, it can't be seen very well." He said, "I have been very much impressed by Cathedrals standing in large open spaces, and I have a good scheme; I think the whole of the property on the North side of St. Paul's Cathedral, Paternoster Row and Newgate Street, should be cleared away." The property on the South side he proposed to pull down almost to the river. He would clear a few streets to the East, but would leave the property on the West. Of course, the idea was ridiculous. But I think we ought to give more attention to such open spaces as we do possess. Most of them are terrible "on plan." Charing Cross, for instance, has no form at all, and the recent improvements have added to the traffic problem; there are more difficulties in crossing, and the architectural form is worse than ever. The same may be said of the space in front of the Mansion House. The plan of Oxford Circus is correct, but Piccadilly Circus is terrible; three-fourths of the Circus are left, and one-fourth has disappeared. It reminds one of the Mock Turtle in *Alice in Wonderland*. "'Once,' said the Mock Turtle, with a sigh, 'I was a *real* Turtle.'" "Once," says Piccadilly Circus, with a sigh, "I was a *real* Circus"! The appearance of that mutilated space is sad in the extreme, and I hope something will be done in the near future to give it proper architectural form. If we get good architectural form for open spaces, it is much better for the regulation of traffic. The easiest traffic for the police to regulate is where a street crosses another at right angles, no matter how wide the street or how great the traffic. There is, for instance, enormous traffic along Cheapside, and King Street and Queen Street cross it at right angles, yet it is dealt with quite easily. But when you get an open space "without form and void," like Charing Cross and the Marble Arch, there are difficulties. I do not think the police always help the pedestrian in

the way they might. Hyde Park Corner is a dangerous crossing. Anybody going in an omnibus from Victoria, and wanting to get out on the north side of Piccadilly, where there is very little traffic, cannot do so; he has to get out at the triangular site by St. George's Hospital, or he is taken about 200 yards up Hamilton Place into Park Lane. Such police regulations do not favour pedestrians, and I maintain that they have a claim to be considered. I have greatly enjoyed Sir Herbert Jekyll's Paper, and support very heartily the vote of thanks.

MR. R. STEPHEN AYLING [*F.*]: I have much pleasure in supporting the vote of thanks for Sir Herbert Jekyll's Paper, in which he has dealt so ably with the question of London Traffic. But I hoped he would have gone more fully into the question of reducing the amount of London goods traffic, rather than increasing the width of the roads in order to accommodate the goods-vans and such-like vehicles which block the streets at the present time. As an architect I am wholeheartedly in favour of wide roads and wide thoroughfares, but I believe it is universally acknowledged that a wide road with a large amount of traffic is more dangerous than a narrower road with a proportionately smaller number of vehicles. The Lecturer stated that there are no statistics regarding the increase during recent years in the number of goods-vans which traverse the London streets. In the Report of the London Traffic Branch of the Board of Trade dated 1913, and published a few weeks ago, statistics were given of the number of trade vehicles passing over the London bridges and through the tunnels. The increase has been from 56 per cent. in 1911 to 58 per cent. in 1912, and I think we can reasonably take it that that increase of 2 per cent. per annum will be greater as the years go on; there will be no decrease. Mr. W. R. Pryke, at the time he gave evidence before the Royal Commission on London Traffic, was Chairman of the Bridge House Estates Committee of the City Corporation, and he stated that five-ninths of the trade vehicles passing over Southwark Bridge were empty; in other words, four-ninths of them were either partially or fully laden. Is not this a waste of energy? Can it not be obviated? At the suggestion of the President of the Local Government Board, Mr. Edgar Harper, who was formerly Statistical Officer of the London County Council, considered this question and reported that the work of collection and delivery of goods in London from a central goods clearing-house could be accomplished by 5,000 motor lorries only. Sir Herbert Jekyll has said that the London clearing-house scheme is one of those which are prominent among the many suggestions for relieving London traffic. That is a question for experts, and he says he is not aware of any experts in the handling of goods who have pronounced in its favour. The list of eminent engineers, electrical and mechanical, who have done so is too long to mention here to-night. The machinery for automatically handling and sorting goods has quite passed the experimental stage, and is in full working order now at Battersea, working in the flesh—not models, but machinery of full size. I agree that the question of housing is inseparable from that of transport, either for human beings or for goods. The area occupied by railway goods-yards in London is little less than that of the whole of the London parks, and it has been calculated that the capital value of the goods-yards is at the present time about £70,000,000. These vast areas of land could be well and profitably employed for the much-needed housing schemes. As I have made two designs for the proposed buildings, as architect to the New Transport Company, in conjunction with the engineers, I believe that the Central Goods Clearing House would have a very great effect in reducing the number of goods-vans in the London streets. One of the Managing Directors of one of the biggest carting contractors in London has stated that if the clearing house were built the scrap-heap composed of the vans for delivering goods in London would be as high as St. Paul's Cathedral. I think most of us would be glad if Sir Herbert Jekyll would give us a rough idea of what would be the cost of the acquisition of the property and the streets proposed, and approximately what number of years it would take for the work to be executed in accordance with the map he has been so good as to show us.

MR. W. R. DAVIDGE [*A.*]: May I associate myself with the words of appreciation which fell from Mr. Raymond Unwin as to the valuable work which has been done by the London Traffic Branch of the Board of Trade? For the first time in the history of London we have got a Government Department actually taking an interest in the affairs of London as a whole. That is a valuable precedent for the future, and I think we, as an Institute, should wish Sir Herbert Jekyll and Colonel Hellard every success in the great labour which they have undertaken. With regard to the Paper, every one here who has gone into the question of London traffic must agree almost word for word with every sentence which Sir Herbert Jekyll uttered. There are one or two points, however, on which I am inclined to join issue with him. The first one which struck me as being not in accordance with my reading of the Census returns is the statement that London has been made by the railways. There is no doubt that in the early part of the century London was increasing slowly; but if you take the percentage increase for every ten years you will find London has been going steadily on, and that it did so long before railways came. And even if railways had not come, London would still have been a great city. I do not know whether it would have been as big as it is now, but that is beside the point. Railways have succeeded in unmaking London. London without railways would

have been a city; London with the railways is a conglomeration of communities. The railways have succeeded in spreading London, and that spreading has had a very valuable effect, as has been well pointed out, in giving people opportunities of getting out into the country. But the condition of things now is different from what it was when the railways came. Eighty years ago, when improvements for London were first talked about, people were talking much the same as people are doing now. They were all agreed that a plan was needed for London extension. And on the second page of Sir Herbert Jekyll's Paper you will find the remark, "It is significant that at this time the efforts of the Legislature were directed to bringing the whole of the main roads in what is now known as Greater London under the control of a single body." Before the railways came there was a body known as the Commissioners of Metropolitan Roads, with very wide powers. These were on the point of being extended, and we should have had a vastly better system of main roads than at present we possess. In the next sentence we are told, "This desirable measure was on the point of being carried into effect when the whole aspect of the question was altered by the introduction of railways." The whole of that idea was knocked on the head. Without railways we should have had some other method of transport; we might have had motor traffic fifty years ago; everything which motors are made of existed fifty years ago, though perhaps everything had not been discovered. Discovery was turned on to another track by the introduction of railways. What we have to bear in mind is that when railways came in, people were experimenting with road vehicles. There was a steam 'bus even then running regularly between London and Birmingham. The necessity for a general plan is obvious to all of us. Take the Tube railways. They have been constructed in the last ten, or say, fourteen years, and they are made of different sizes, so that the Great Northern and City, when it wants to connect on to the South London, finds that it has to alter the whole of the tube; it has to be made bigger, and that involves considerable engineering difficulties. That is only one instance of the necessity for a general plan to deal with both roads and railways. On the next page is the crucial point of the Paper, namely, that the volume of traffic is increasing more rapidly every year. If there is a danger signal anywhere in this Paper, it is that. Every year the difficulties are getting greater, and every year the traffic is increasing in volume; not in a regular percentage but in an increasingly greater ratio; and unless something is done soon we shall not be able to talk about town-planning London unless we start the other side of Windsor. I do not think I am exaggerating when I say that unless something is done very soon it will be too late. The suggestion which has been made that each of these different competing kinds of traffic should learn to find its own place is a valuable one. Another suggestion of value is that railways should be used to deposit passengers at long distances. The great railways should run non-stop through trains for at least ten miles without a stop, and that would be a good thing for London. We do not want so many stations, certainly not for rapid traffic. The use of light railways has much to commend it, and the use of light railways and tramways jointly needs careful consideration. Most of you know the tramway or light railway which runs between Cologne and Bonn, and there are a number of others in Germany. In the open country this light railway travels at 30 or 40 miles an hour, with practically no stops at less intervals than 5 or 10 miles. When it gets into a city, it becomes a tramway, and stops at more frequent intervals. It seems to me that some such system, a combination of rapid travel in the outskirts with slow travel in the centres, is necessary here, and that may be a solution in the direction of the valuable object-lesson which has been suggested by the Southend Railway. That example shows what can be done by a railway alive to possibilities, and if every company followed the example of the Southend Company, and took their passengers to great distances, it would be the best thing for the Metropolis. There is no need to continue building on the outer fringe of London. Let us go further afield, and start a new nucleus, and build out there. You could take any existing country town and use that as a nucleus if necessary; but there is no reason why you should go tacking on to the outskirts, either at Golder's Green or Ealing, when we might start 20 or 30 miles out. It is solely a question of time. We must secure these open belts of country while yet there is time; we must not let London grow in spite of ourselves. Another word I would like to say concerns the very valuable suggestion which has been made, that fast road traffic will have to approximate more nearly to railway traffic. We must reckon on getting through facilities; we shall have to have roads entirely for fast traffic if necessary, with no cross-roads running into them; or we must introduce tunnels in order to deal with the problem. I am glad to be able to add my extreme appreciation of the vast labours of the London Traffic Branch, and to congratulate that Branch on the additional powers which have been promised them in the near future; and we may, as an Institute, have every confidence in the far-seeing manner in which those powers will be used.

MR. FRANCIS HOOPER [*F.*]: In thanking the Lecturer and Colonel Hellard for what they have brought before us, I feel strongly that this is a matter in which the public needs stimulating. Sir Herbert Jekyll and his Board have been endeavouring to instruct representatives of district authorities round London, but I respecfully urge that we want something more, and suggest that the plan which has been prepared by Colonel

Hellard should be reproduced on a clear and large scale, and that a copy should be hung in the Council-room of every local authority round London. We are unfortunate this evening in the absence of one deeply versed in this subject. Sir Aston Webb has visions of London a century ahead. Is it not possible to interest railway engineers, architects, and surveyors in this scheme, a fund being raised for the purpose by the local authorities concerned, in proportion to their rateable value, to offer and pay premiums for the most effective schemes produced by a certain date, and to divide London into such sections that it would be possible to work at in detail and to aid Colonel Hellard's proposal? There are buildings and open spaces to be preserved, railway stations and varied trains to be considered before the arterial roads are determined, all requiring an enormous amount of thought and co-operation on the part of every authority on the route.

THE PRESIDENT: We are extremely fortunate to-night in having to address us on this intricate problem two of the leading experts of the country. We have listened to a most careful, thoughtful, and, I may say, most masterly Paper from Sir Herbert Jekyll, and Colonel Hellard has given us that extraordinarily interesting map for which he is responsible. We have had, too, some very interesting speeches from various of our members. I myself do not profess to know anything about this subject—I have to admit it with shame—but I listened to our members when they threw a profusion of valuable figures at our heads, and I am surprised at their erudition. I do not propose to detain you with many remarks of my own, but there are one or two things that Sir Herbert said which I think are, quite apart from this immensely important subject, of interest to us as citizens, and also as men who have to deal with the laying out of building estates. Among the points of special interest was this great change or habit to which he called attention, and which is due to the change in modes of locomotion—viz. the centrifugal tendency, the tendency to get further and further afield. He pointed out, with kindly thought for us, that this may mean and need a further sphere for building operations. People do not care about distance so much; it is a question of time. If you can be hurled along at fifty miles an hour to places where there are large areas to be built upon, enterprising architects will go, and I have no doubt will develop a fresh type of house, because these occupiers of houses will not be wholly countrymen; their work will lie in London, and they will be half-and-half. So we may get a fresh type of house, and that is one sphere of our activities, apart from the main question. Then there was another point touched upon by Sir Herbert which interested me very much, and I was very glad to hear Mr. Raymond Unwin comment upon it. That is the width of the roads. Sir Herbert said they should be, if possible, at least a hundred feet wide. It would be a great thing to get as much as that; but even that, as Mr. Unwin said, is not wide enough for all the purposes which are wanted, and it occurs to me that in my wanderings among the provincial towns of France I have seen many an old town of comparatively minor importance which has its main access considerably over a hundred feet wide, often planted with a double avenue of trees, which shows by the way how far we have dropped behind in civilisation, in that we have now, two hundred years afterwards, to try and recapture some of the achievements of the civilisation of the eighteenth century. There was another point which Sir Herbert mentioned, for which all architects should be grateful to him: he pointed out that bridge-building was really the affair of the architect, in co-operation with the engineer, and that it was not for the engineer to design the bridge and call in the architect to act with him. He speaks as an expert engineer himself, and this recognition from him is very welcome to all of us. Sir Herbert touched on many points of vital interest, but the main theme which they all lead up to was that there ought to be some Central Authority to prevent a recurrence of the innumerable and most costly mistakes made by our predecessors. I think all sensible opinion has come to that conclusion. Mr. Hooper referred to some admirable remarks in a discourse of Sir Aston Webb's lately. I have before me a letter from Sir Aston, which I will read to you. He says:

"I have read Sir Herbert Jekyll's Paper with great interest, and am very much disappointed that, owing to a chill, I am unable to attend this evening. The question of the laying out of the arterial roads for London is one of vital moment to all interested in London town-planning, and I venture to agree with every word Sir Herbert Jekyll has said. Had I been present, I should have asked the Meeting to pass some such Resolution as the following, using Sir Herbert's own words:

> "'That what is urgently required is a Central Authority, with power first to lay down the lines of arterial roads, and, secondly, to require local authorities to make their schemes conform to prescribed lines which happen to traverse their areas'—the Resolution to be forwarded to the authorities concerned."

I think that is a proposal we might well act on. I myself should like to see Sir Herbert Jekyll and Colonel Hellard invested with the powers of the Prefect of the Seine, though I do not think we can put that forward from this Institute. But I think you will agree to such a Resolution as this, and that it be forwarded to the authorities concerned. I will now put the vote of thanks, and afterwards ask you whether you approve of this Resolution.

The vote of thanks was carried by acclamation, and the Resolution as above, moved by Mr. Raymond Unwin and seconded by Mr. George Hubbard, F.S.A., having been put from the Chair, Mr. Maurice B. Adams asked if it could not be modified to include railways, and referred to the proposed scheme for extending the Great Northern Railway through Ealing and round about the suburbs in the North of London, by which vast areas of playgrounds and recreation grounds would be practically destroyed. When railway companies proposed schemes of this sort there should be a Central Authority to determine beforehand the lines on which such schemes should be carried out. He thought it imperative that the Resolution should include a reference to railways.

THE PRESIDENT said he was quite in sympathy with Mr. Adams on this point, but it raised a wider issue which should be dealt with separately. It would be wiser, he thought, to stick to the terms of the Resolution.

The Resolution was then put and carried unanimously.

SIR HERBERT JEKYLL, in reply, said: I would first thank you, Mr. President, and the gentlemen present for the very kind way in which they have listened to my remarks, and for the vote of thanks which they have been pleased to give me. It is a great pleasure to me to come here and address you on this subject. It is now so late that I can do no more than touch lightly on some of the points which have been raised in the discussion. Mr. Raymond Unwin referred to the possibility of goods traffic being carried on underground. That, no doubt, would be a most desirable measure, and the action of the Post Office in constructing an underground railway for the conveyance of their mails may lead to something of that sort in the future. It is purely a commercial question whether it is likely to pay. He referred to New York. Manhattan Island, which is the centre of New York, is a very restricted area. It is a long, narrow island, and it is necessarily congested because there is no room for expansion, though it is becoming possible to spread out now, owing to the railways which are being constructed. I was told as a fact—which I do not vouch for—that there is not room in the streets of New York for all the inhabitants of New York to stand at the same time! Then there is the question of pedestrian traffic and accidents. That is a question which has loomed very large of late, and, of course, it is a very serious one. It is often supposed, and, I think, unjustly, that the vehicles which cause the accidents take a malignant pleasure in killing and injuring as many people as they can. That is not the case. There are none to whom it is of so great importance to avoid accidents as the people who cause them. A large proportion of the accidents which happen are due to the want of the most ordinary care and caution on the part of the unfortunate people themselves. There is only one way, as far as I know, of preventing accidents in the streets of London, and that is by prohibiting all wheeled traffic of every description! When you consider the enormous volume of traffic of all kinds, it is not surprising that accidents should happen. They are deplorable, and the number by itself sounds formidable, but when taken in relation to the number of people moving about, and the number of vehicles, the proportion is not large. Then there is the question of refuges. Of course, refuges are of the utmost importance, and they should be, in some streets, added to considerably in number; but centre lamp-posts are different. There must be refuges at the principal crossings, but it is not desirable to have things which though not intended to be refuges are used as such, along the whole length of the street, so that they tempt people to cross at many different points when crossing should be restricted to well-defined points where their safety can be properly looked after. Those lamp-posts and the spaces which surround them are more likely to cause accidents than to prevent them. The question of a clearing-house is a very large one. I was asked what would be the cost of the measures which are now proposed for the improvement of the roads, and how long those measures will take. My answer to that is, I do not know. A clearing-house sounds an admirable thing; I am not against it, but it is for expert people like the goods managers of our railways to say whether it will work or not. The real test of the feasibility of this scheme will be when it comes to be discussed in the Committee-rooms of the Houses of Parliament. There is one point which has not, so far as I know, been mentioned in connection with this proposal of a central clearing house, which will entail the employment of a very large number of people. We are all familiar with the Labour disputes of the day, and it is possible, if all the goods traffic of London were concentrated under one roof, that you might easily have a movement of that kind which might paralyse the whole traffic of the city. There may not be much in it, but it is a point which is deserving of consideration.

MR. W. E. RILEY [*F.*], Architect of the London County Council, writing since the Meeting, says:—

There is probably no question at present before the inhabitants of this great city which is so urgent as the problem of our traffic, and, remembering what ceaseless effort is required before anything is done, we should all be grateful to Sir Herbert Jekyll for bringing the subject again to public notice. The inconvenience and peril of the existing state of affairs is constantly present to the man in the street, and yet it is remarkable with what apathy these very real dangers come to be regarded, and how difficult it is to stir up some definite action. Royal Commissions have an unenviable reputation for inducing a state of lethargy, but no one can have studied the Report of the Royal Commission

on London Traffic in 1905 without a feeling of despair that so much labour and thoughtful consideration should be treated with such indifference. The Traffic Branch of the Board of Trade has continued the good work begun by the Royal Commission, but it must be frankly confessed that until the man in the street bestirs himself, there seems to be little likelihood of much being done.

We shall also probably agree that, as the Royal Commission laid down and Sir Herbert emphasises, the narrowness of our streets is at the root of the problem, and my official experience during the last fifteen years has quite convinced me as to this. It is an even more important factor than the want of a definite plan, and a great deal is undoubtedly due to the inadequacy of our building laws. The minimum width of streets in London was fixed at 40 feet by a By-law made in 1857, and it remains the same to-day, more than half a century later. This applies only to the County of London, and it is a further illustration of the unsatisfactory state of affairs when we find that adjoining the County there are districts, each having its own By-laws, in which the minimum is in some cases 36 feet, in others 40 feet, in others 45 feet, and in some 50 feet. The maximum width which can be required under the London Building Act for a new street is 60 feet, compensation being payable in certain cases, but it may be considered that even this width does not in the circumstances meet modern requirements. It would only come within the classification of a third-class street as defined by the Royal Commission, and as a concrete example the case of Shaftesbury Avenue may be quoted. This street, which was completed in 1886, is 60 feet wide, and the width of the carriage-way near its junction with Piccadilly Circus is about 36 feet. The width of a motor-'bus over-all is about 7 feet, so that provision is only made for practically four lines of traffic, excluding any allowance for standing vehicles, street refuges, and other unavoidable obstructions.

The disadvantages under which the Capital City of the Empire suffers are the more apparent when one remembers that smaller provincial towns enjoy so much more favourable conditions. In Barrow-in-Furness, for example, the Corporation in 1875 obtained an Act empowering them to require a width of 80 feet in main outlets, and considerable lengths of streets have been constructed of this width. Liverpool obtained Parliamentary authority in the same direction in 1908, and various local authorities throughout the country have similar powers. Abroad we find even more comprehensive powers in operation, and we are forced to ask, why should London have such unenviable distinction? The County Council in 1905 certainly endeavoured to obtain power to define in important thoroughfares a building-line not more than 75 feet from the centre of the street, provision being made for compensation; but the immediate result was the presentation of sixty-four petitions against the Bill, including one from the Royal Institute of British Architects. Perhaps, after this meeting, the Institute might be more favourably inclined to such proposals.

Sir Herbert has drawn attention to the necessity for locating the principal outlets, in order to prevent the creation of obstructions to future widening to meet traffic requirements. This was one of the most important recommendations of the Royal Commission, but, like most of the others, it has as yet been treated as non-existent. The case of Euston Road may be quoted as an example. An Act of 1756 prohibited the erection of buildings within 50 feet of the highway on each side of the New Road, re-named in 1857 as Marylebone, Euston, and Pentonville Roads. These streets are thus bordered for considerable lengths by forecourts. In many other places, however, buildings of varying heights were allowed to be, or were erected in advance of the general line of buildings, with the result that the width of what was intended to be a highly important thoroughfare has been much curtailed, and the opportunity to create a fine boulevard through the North of London greatly impeded. Attempts have recently been made to re-establish the general line of buildings in these thoroughfares, with some success, but only after prolonged and costly litigation; but if sufficient attention had been given to the intention of the Act of 1756, a much-needed improvement could now be carried out at comparatively small cost to the public. The creation of obstructions to widening in these streets applies equally to other main roads in London, and as it can only be assumed that the growth of the city and its traffic will continue, it behoves us to exercise more foresight than is exhibited in some of the unfortunate examples which surround us.

Books Received.

Windsor Castle: An Architectural History. Collected and written by command of their Majesties Queen Victoria, King Edward VII., and King George V. By W. H. St. John Hope, Litt.D., D.C.L. With reproductions in colour of drawings by Paul Sandby; collotype reproductions of drawings, engravings, and photographs, and woodcuts by Orlando Jewitt. 2 vols., with portfolio of plans in 14 colours. Imp. 4o. Lond. 1914. Price Six, Eight, and Ten Guineas net, according to binding. [*Country Life*, 20 Tavistock Street, Covent Garden.]

Houses and Gardens. By E. L. Lutyens. Described and Criticised by Lawrence Weaver. With 500 illustrations 100 plans, and 16 pages of Detail Drawings. Fo. Lond. 1913. Price 25*s.* net. [*Country Life*, 20 Tavistock Street, Covent Garden.]

The Garden City Movement up to Date. By Ewart G. Culpin, Secretary to the Garden Cities and Town Planning Association. 4o. Lond. 1913. Price 1*s.* net. [Garden Cities Association, 3 Gray's Inn Place, W.C.]

Spons' Architects' and Builders' Pocket Price Book, 1914. Edited by Clyde Young [*F.*] and Stanford M. Brooks [*Licentiate*]. Forty-first Edition. Price 2*s.* 6*d* net.; by post 2*s.* 8*d*. [E. & F. N. Spon, Limited, 57 Haymarket.]

REVIEWS.

SANITATION.

Drainage and Sanitation: a Practical Exposition of the Conditions vital to Healthy Buildings, their Surroundings and Construction, their Ventilation, Heating, Lighting, Water and Waste Services. For the use of Architects, Surveyors, Engineers, &c. By E. H. Blake. With 379 illustrations, specially drawn by the Author. 8o. *Lond.* 1913. 10s. *net.* [*B. T. Batsford, 94 High Holborn, W.C.*]

It would be hard to conceive of an adequate treatise on "Sanitation" which did not include "Drainage," and this book is most inclusive. Whatever faults one might find with it they are not sins of omission; in fact, it is a perfect mine of information. And that is the point—mining suggests excavation and screening. Life is too short for sifting our information; we want the real thing on the surface—the unalloyed material in a handy form. The preface states that, "Intended primarily as an introduction to the subject, it is hoped that the following pages" [over 500 by the way] "may prove of interest to both the novice and the experienced practitioner." The "novice," with only the bare chance of attaining the proverbial three-score-and-ten, would probably take fright at the prospect of his extensive curriculum being in proportion with this "introduction" to merely one of the subjects, and contemplate some other career before the expiration of the allotted span. The "experienced practitioner," on the other hand, however his interest might be stirred, would find his practice materially interfere with the perusal of the pages of so extended a work. But in the reference library the volume would be of immense value, all the more enhanced by the very complete index provided. But even regarding the book from this standpoint, one would suggest that a freer use of the blue pencil would have had a beneficial effect. It is hardly necessary to explain what rain is, or wherein it differs from fog, in order that one may know how to construct a waterproof roof. The author admits that "the origin of fire is about as uncertain as the date of the discovery of coal as a fuel." This is fortunate, or the history of fire and coal would have materially increased the proportions of the chapter on Warming and Lighting. As it is, the historical remarks date from pre-Roman times, which is more than sufficient for one who may be desirous of discovering the principle of the Manchester stove.

The volume is dedicated "to the President and Council of the Surveyors' Institution, which, by the medium of its examinations, has rendered a knowledge of this subject more general." Incidentally, it might be observed that other institutions have done something in that way, including the Royal Sanitary Institute.

Taking the natural order of things, the author deals first with the selection of a site. A position on a hill-top is not desirable unless protected by a belt of trees. The hillside is not altogether favoured. This is understandable when, reading later, one meets with the elaborate and expensive methods which may be necessary to avoid dampness. Low-lying districts are also to be avoided if possible. The impression left is that of a somewhat limited selection. These are admittedly "counsels of perfection," which may be wise in many ways but are liable to leave the student with a distorted judgment when he comes to deal with practical everyday questions. For the same reason, for a lead flat to fall three inches in ten feet would probably lead to an unnecessary expense in firring, 7 or 8 lbs. lead for flats and gutters would, in most instances, be rather above the average unless considerable traffic is anticipated; whilst in conjunction with parapet gutters the damp-proof course advocated to be laid "just below roof," appears to be a needless luxury probably never required where snow grids are used, and, if required, would not be very effectual. On the other hand, some points can scarcely be said to be ideal—the suggested use of the slate damp-proof course, and the advocacy of stoneware bonding bricks for cavity walls. One would not expect a textbook on Sanitation to tolerate the discharge of the subsoil drainage into the foul drain, with the possibility of the trap becoming unsealed by evaporation in times of drought. No word is given in discouragement of the use of wallpapers, though in the case of renewal it is stated that "the old paper should be entirely removed from the walls, as it will have absorbed dirt and possibly not be free from germs, while behind it will be decomposed paste in most cases."

Generally speaking, the treatment of the subject of construction in its relation to the exclusion of damp is clear and sufficiently elementary for the requirements of the student.

The chapter on Ventilation supplies some very useful information described in a lucid and concise form, and containing descriptions of various inlet and extract appliances in relation to natural ventilation. The Plenum system is also dealt with at some length; but as this section of the work bears a filial resemblance to a treatise of which the present reviewer is the author, he does not feel justified in making further comment on the subject.

Probably the chapter which is most consistent with the aims of the book is that which treats of Warming and Lighting. With the exception of a page or two of the history and methods of days gone beyond recall, this section is packed with information that cannot fail to be of use to the student. The author deals with the popular prejudice against the closed stove (and one might add steam and hot-water systems)—"people want to see the fire." The prejudice, nevertheless, is a very real one, and has to be met often at the expense of personal comfort and even of health.

In the case of gas fires, it is stated that the inferior types of apparatus "give off the products of imperfect combustion, appear to dry the air, and cause a feeling of oppression." It would have been interesting had the type of gas fire been indicated which is not subject to these defects.

The description of the high- and low-pressure hot-water and steam systems of warming is clear and to the point, and well illustrated. Succeeding a few remarks on fenestral lighting, this useful chapter concludes with a short description of artificial means of lighting; the candle, oil lamp, ordinary gas burners, incandescent gas burners, and electricity are each dealt with, and it is interesting to note that if a room were lighted with exactly the same *quantity* of light by each of these methods, the comparative vitiation of the air would be 1, ·7, ·45, ·27, and 0 respectively. Thus science and experience has worked much in the health of our homes by the abolition of the "*candle*" (the earliest, and at one time the only illuminant) for the popular and healthful "*electricity*."

Two chapters (extending over ninety pages) are devoted to Water Supply, describing the properties and qualities of water, the sources of supply and storage (including the calculation of pressures in reservoirs), the methods of purification, systems of supply, service pipes of various kinds, valves, cocks, taps and cisterns, cylinders, tanks, boilers, and the usual hot-water circulating systems, and extending to several types of pumps, and the uses and construction of hydraulic rams. Indeed, these two chapters alone contain sufficient material for a treatise on the subject with which they deal; but, regarded as a section of an introductory book, these ninety pages are too exhaustive (and too exhausting) for the purposes of the general student.

As is to be expected in a treatise on Sanitation, a very large proportion of the book is devoted to sewage disposal and drainage. In a sense, this may be regarded as the most important of the various subjects falling within the title. In many respects, after due allowance for what may be regarded as matters of opinion, these pages are somewhat disappointing. The question of trough closets is dealt with and dismissed in a few lines. One would have expected, in a book dealing with modern sanitation, that these filthy contrivances would have been strongly condemned. No automatic flush discharging at stated intervals, however frequent, can prevent an accumulation of foul matter in the trough, whether divided into separate compartments or not. Sanitary authorities have for some time condemned the whole principle, and separate pans with water-waste preventing cisterns are now used in modern schools, factories, &c. The rain-water shoe, shown in fig. 219, is not of good design, the bend from the socket end should be easier; otherwise the tendency is for the force of water to splash back and force the grating or cover. The author does not appear to have chosen the best and most up-to-date sanitary fitting for the purpose of illustration. Many manufacturers have spent a considerable time in perfecting the earlier forms of gullies, shoes, clearing arms, inspection doors, &c., the result being that much more efficient fittings are now at the disposal of the architect and engineer. Access hole stoppers, as shown in fig. 226, are not very efficient; if fixed with red lead they are apt to blow out, and if cemented in, are useless. A better way is to carry the end of the drain to the surface with an easy bend and fix over same at ground level a galvanised iron air-tight locking cover and frame, which can be fixed in the socket, several varieties of which are to be obtained, the gully or other fitting being connected to the drain with a Y junction fixed below the bend. In figs. 255 and 257, bends in manholes, entering above the invert of channels, should not be used for carrying soil, which should discharge on a level with the main channels. It is a pleasure to note that the author does not agree with the proposal brought forward by many of the local authorities that the house drainage should not be disconnected from the sewer. To have the sewer air brought to the drain side of every trap used in connection with the drainage of a house is to bring the danger much closer and to many points (instead of cutting off at the one point furthest from the house), the failure of any one of which would cause an escape of sewer air into the premises. The local authorities are no doubt influenced by their wish to obtain a cheap method of overcoming the difficulty of obtaining ventilation to their sewers.

Figs. 277 and 278, showing two methods of house drainage, are not very happy. In fig. 277 the vent pipe should have been taken off the head of the soil drain; the rain-water pipe in the forecourt is shown taken direct into the intercepting chamber without any gully at the foot of the pipe; the same remarks apply to fig. 278, only here the offence is further aggravated by the fact that two rain-water pipes are shown connected direct to the chamber, the cast-iron soil drain carried under the house is not ventilated; very little extra expense would have been entailed if the drain from the inside w.c. had been taken outside and connected to a small additional manhole at the end of the back addition. In fig. 279, No. 4 rain-water pipes are shown connected direct to the soil drain; and in fig. 280 the whole of the rain-water service is shown in a similar manner, and the long length on the roadside is unprovided with a proper vent pipe. These illustrations should have been overhauled and made *sanitary* before being placed before the public. In fig. 282, manholes No. 2 and 7 would have been better if placed in the same line as the drains to manholes No. 3 and 4 respectively. This arrangement enables a man to work the rods through in case of stoppage; as shown on the plan the space available is too cramped.

The author has devoted two chapters to sewage and sewage disposal. The descriptions given of the

various methods adopted, though brief and to the point, are sufficient to give the student a good idea of the different processes. Equally praiseworthy in this respect is the chapter in which the composition, properties, and manufacture of the principal materials used in sanitary works are described, supplying as it does in a concise form ample information sufficient to enable those engaged in the supervision of such works to distinguish the proper from the inferior manufactures, whilst the suggested headings for a specification of sanitary works will be found very useful. The author's remarks on sanitary surveys and reports form a valuable addition not generally met with in books on sanitation.

The last chapter, XV., dealing with legal notes, is both comprehensive and of use to the professional man, but the loose manner in which the various by-laws have been drawn up, and the many and varied interpolations of them which have been made by the different local authorities, render it impossible to give any definite decision as to what may or may not be done. Details of sanitation which may be compulsory in one district are often condemned in the adjoining. Many authorities take a narrow-minded view and compel the builder to carry out the exact letter of the by-law where, in many instances, better and more efficient sanitation can be obtained by a different method. The author's clear explanations and cases quoted should enable the reader to avoid many pitfalls.

The work may be regarded as a really valuable addition to technical literature, and may be confidently recommended as containing a store of valuable information—and some that is not so valuable. Few architects or sanitary engineers have a practice so diversified as to include carpet-beating, or a practice so wide that the branch office among Greenland's Icy Mountains requires information as to the accepted local substitutes for window glazing. But this is by the way; to some these little digressions may be interesting, but to all requiring a reference book on Sanitation the work, as a whole, should prove useful.

HAROLD GRIFFITHS [*A.*].

ORNAMENT.

The Evolution of Architectural Ornament. By G. A. T. Middleton [*A.*]. *La.* 8*o. Lond.* 1913. [*Francis Griffiths*, 34 *Maiden Lane, Strand, W.C.*]

Mr. Middleton has added a great deal to the debt owed to him by all whose daily work is in the realm of design by the production of this volume. It is not to be confounded with the number of text-books of ornamental design which appear to be intended, some of them at least, as a convenient source of "inspiration" for all such as have neglected to acquire the rudiments of their calling in the proper way, but it is a book bearing in its text and illustrations the imprint of a student of design who has travelled far and thought much. The author traces the whole range of decorative work back to what he, and all of us, for want of greater knowledge, must presume to be original forms. The familiar anthemion is followed up through all its well-known disguises to others we may not so easily recognise, and by the stretching of a tendril or the unfolding of a leaf we are led over some unexpected bridge to find on the further side all the light carvings of the Renaissance brought as it were into line as the legitimate offspring of the old, old friendly acanthus we all in our student days drew in pencil and ink, and then shaded beautifully in sepia—to satisfy the dread examiners of the Institute. And so he finds it to be with all foliage design; all that we call Classic, or Gothic, or Renaissance is shown by well-found arguments to be derived from such simple basic principles as a leaf or some animal form.

The author draws attention to the singular circumstance that in Gothic design the types of foliage employed followed, in a degree, the rotation of the seasons, but argues with reason that it must have been purely accidental. This is a view with which the present writer entirely agrees, but it should not be difficult to show that such a development was the inevitable consequence of the changes in style. In the illustration from Henry VII.'s Chapel at Westminster, for instance, it would be extremely difficult to design any form of foliated ornament which would be suitable to the attenuated character of the many-buttressed pinnacles, and it might be argued that anything requiring more detail than mere twigs and tendrils would have confused the general perpendicularity of the work and introduced a discordant note.

The book contains a wealth of illustrations, most of them either photographs taken by the author or sketches from his pleasantly sympathetic pencil, and concludes with an interesting chapter on some Classic remains at Alexandria. In conclusion, there is one point on which Mr. Middleton may find consolation, for the glorious bronze gates made by Sansovino for the loggietta of the Campanile at Venice are still to all appearances intact, and now adorn the new tower recently completed. How much "restoration" they have had to undergo is, perhaps, the secret of the Italian authorities.

ROBERT W. CARDEN [*A.*].

COTTAGES.

The "Country Life" Book of Cottages. By Lawrence Weaver. 8*o. Lond.* 1913. *Price* 5*s.* ["*Country Life*" *Office*, 20 *Tavistock Street, Covent Garden; and G. Newnes, Ltd.*, 8–11 *Southampton Street, Strand.*

The little volume with which Mr. Lawrence Weaver has followed up his previous books will be found most helpful to designers and builders of cottages, the successful accomplishment of which is a somewhat complex problem.

The absurdly stringent by-laws prevalent in many country districts, the vital question of cost and the very small scale of the work, all help to increase the complexity of the problem, and the author's book will be welcomed by all interested in the matter.

Mr. Weaver divides his work up into a series of chapters all excellently and concisely written; of these the introductory chapter is by no means the least important, dealing as it does with the initial obstacles in the designer's path. It is to be desired that clients may read this chapter carefully, and note that the author states therein that the cost to-day of the cottages illustrated in the succeeding portions of the book is at least 25 per cent. greater than the amount stated.

The following chapters cover a much wider field than the title of the book suggests, describing as they do buildings so widely differing in character as the labourer's cottage, the cottages and small houses at Gidea Park, Essex, those at Hampstead Garden City, and the competition designs for the "*Country Life* £600 Cottage." Strictly speaking, much of the work above named is of the small house and not the cottage type, and their occupants would probably be aggrieved if described as otherwise than householders. Generally, however, the illustrations of actual buildings are aptly selected and the plans interesting.

We must, however, take exception to the so-called £150 cottage, illustrated upon pp. 16 and 17. In the first place this design is for a pair of cottages and the cost is put at £300; the planning leaves much to be desired, and the long gutter between the pitch roofs is bad constructionally. It is fortunate that the much abused by-laws will prevent the building of this type of cottage in many districts. Again, the back-to-back cottage flats, figured on pages 33 and 34, are surely a retrograde move, and whether erected in urban or rural surroundings would be cheerless and stuffy; the present craze for cheapness has doubtless evolved both of these examples.

The author's remarks upon planning are suggestive; the question of providing a parlour as well as kitchen in the labourer's cottage is discussed. Our own experience is that parlours are but little used, and it is better to give the labourer a large kitchen living-room, and to fit up a small range in the scullery for summer use.

A very interesting chapter is the one upon repairs and alterations to existing cottages, containing much valuable information and suggestive procedure in such work. The illustrations show that the various designers have intimate knowledge of and sympathy with old work, and it is only by these means that the present-day designer can hope to produce satisfactory work; indeed, one may safely say that the good cottages illustrated in Mr. Weaver's book are the outcome of such study.

W. G. HORSEMAN, *Licentiate.*

9 CONDUIT STREET, LONDON, W., 31*st January* 1914.

CHRONICLE.

R.I.B.A. PRIZES AND STUDENTSHIPS 1914.

The Council's Award.

The Designs and Drawings submitted for the Institute Prizes and Studentships are now on exhibition in the R.I.B.A. Galleries (9 Conduit Street, W.). The Council's Deed of Award, read at the General Meeting of the 26th January, gives the results as follows:—

THE ROYAL INSTITUTE SILVER MEDALS.

(i.) *The Essay Medal and Twenty-five Guineas.*

Six Essays on various subjects selected by the competitors themselves were received for the Silver Medal under the mottoes and titles as follow:—

1. "Daedalus": Minoan Architecture: A Study of Pre-Hellenic Art in Crete.
2. "Filogenovesato": The Architecture of Genoa.
3. "Oskytel": A Monograph upon Southwell Minster, Nottinghamshire.
4. "Per Ardua ad Astra": The Influence on Architecture of the Condition of the Worker.
5. "Resurgam": The Rebuilding and the Workmen of St. Paul's Cathedral, from the "Accounts."
6. "Stet Fortuna Domus": An Historical Account of the principal London Buildings erected by the firm of Grissell and Peto between the years 1830 and 1846.

The Council award the Medal and Twenty-five Guineas to the author of the Essay on "The Influence on Architecture of the Condition of the Worker" submitted under the motto "Per Ardua ad Astra"*; a Certificate of Hon. Mention and Five Guineas to the author of the Essay "The Rebuilding and the Workmen of St. Paul's Cathedral, from the 'Accounts'" submitted under the motto "Resurgam"†; and Certificates of Hon. Mention to the authors of the Essays "The Architecture of Genoa" under the motto "Filogenovesato,"‡ and "Minoan Architecture" under the motto "Daedalus."§

* "Per Ardua ad Astra": Thomas Simons Attlee, M.A. Oxon. [*A.*].
† "Resurgam": James Mitchell Halley, *Licentiate.*
‡ "Filogenovesato": Martin Shaw Briggs [*A.*].
§ "Daedalus": Alexander Robert Chas. Eaton.

(ii.) *The Measured Drawings Medal and* £10. 10*s.*

Six sets of drawings were sent in of the various buildings indicated, and under mottoes as follow :—

1. "Amussim": 6 strainers (Château de Maisons-Laffitte, 1642–1650).
2. "Dauber": 6 strainers (Vigna di Papa Giulia, near Rome).
3. "Pax": 6 strainers (Fountains Abbey, Yorkshire).
4. "Rags": 5 strainers (San Pietro, Montorio, Rome).
5. "Strike": 4 strainers (The Customs House, Dublin).
6. "The Royal": 5 strainers (Royal West of England Fine Arts Academy, Bristol).

The Council award the Medal and Ten Guineas to the author of the drawings of San Pietro, Montorio, Rome, submitted under the motto "Rags."*

THE TRAVELLING STUDENTSHIPS.

(i.) *The Soane Medallion and* £100.

Eight Designs for an Official Country Residence for a Royal Personage in the United Kingdom were submitted under the following mottoes :—

1. "Akarana": 4 strainers.
2. Anchor (device): 6 strainers.
3. "Cornucopia": 7 strainers.
4. "E X V L": 5 strainers.
5. "Farnesina": 6 strainers.
6. "Halibut": 6 strainers.
7. Thistle (device): 7 strainers.
8. "X X X": 4 strainers.

The Council award the Medallion and £100 (under conditions) to the author of the Design submitted under the device of a "Thistle"†; a Certificate of Hon. Mention and £10. 10*s.* to the author of the design submitted under the motto "Farnesina"‡; and Certificates of Hon. Mention to the authors of the designs submitted under the mottoes "Akarana"§ and "Anchor"‖ respectively.

(ii.) *The Owen-Jones Studentship and* £100.

The Council much regret that no applications were received for this valuable prize.

(iii.) *The Pugin Studentship and* £40.

Five applications were received for the Pugin Studentship from the following :—

1. G. E. Charlewood: 4 strainers.
2. Gordon Hemm: 4 strainers.
3. William H. Hamlyn: 4 strainers.
4. Julian R. Leathart: 4 strainers.
5. W. Cecil Young: 4 strainers.

The Council award the Studentship, Silver Medal, and (subject to the specified conditions) the sum of £40 to Mr. William Cecil Young, and a Certificate of Hon. Mention to Mr. Julian R. Leathart.

* "Rags": James Bennett.
† "Thistle": Cyril A. Farey.
‡ "Farnesina": H. Chalton Bradshaw.
§ "Akarana": Gordon Samuel Keesing.
‖ "Anchor": Thomas Chalkley.

(iv.) *The Godwin Medal and* £65.

Two applications were received for the Godwin Bursary from the following :—

1. Martin Shaw Briggs.
2. A. F. Wickenden.

The Council award the Medal and (subject to the specified conditions) the sum of £65 to Mr. Martin Shaw Briggs [*A.*].

(v.) *The Tite Certificate and* £30.

Eight Designs for the best Imaginative Composition in Perspective in the Italian Style for an Important Fountain were submitted under the following mottoes :—

1. "Cascade": 3 strainers.
2. "Fons": 3 strainers.
3. "Golden Dolphin": 4 strainers.
4. "Joy": 3 strainers.
5. "Merry and Bright": 4 strainers.
6. "Panama": 4 strainers.
7. Red Dragon (device): 4 strainers.
8. "32": 1 strainer.

The Council award the Tite Certificate and (subject to the specified conditions) £30 to the author of the Design submitted under the motto "Golden Dolphin,"* and a Certificate of Hon. Mention and £10. 10*s.* to the author of the Design submitted under the motto "Panama."†

THE ARTHUR CATES PRIZE: FORTY GUINEAS.

One application was received for the Arthur Cates Prize, viz. from Mr. John Charles Rogers, who passed the Final Examination last June, and the Council have awarded him the prize.

PRIZE FOR DESIGN AND CONSTRUCTION.

The Grissell Gold Medal and £10. 10*s.*

Three Designs for a Four-Story Dockside Warehouse were submitted under the following mottoes :

1. "Composite": 3 strainers.
2. "Percy Vere": 6 strainers.
3. "Syrod": 3 strainers.

The Council award the Medal and £10. 10*s.* to the author of the Design submitted under the motto "Syrod."‡

THE ASHPITEL PRIZE 1913.

The Council have, on the recommendation of the Board of Architectural Education, awarded the Ashpitel Prize to Mr. Wm. Wallace Friskin [*Probationer* 1913, *Student* 1913], who passed the Final Examination last December, he being the candidate who has most highly distinguished himself in the Examinations held during the current year.

* "Golden Dolphin": Trenwith Lovering Wills.
† "Panama": Arthur Gordon Shoosmith.
‡ "Syrod": Philip D. Bennett.

The Travelling Students' Work.

Pugin Studentship 1913.—The Council have approved the work of Mr. Wm. Paterson, who was awarded the Studentship in 1913 and travelled in Lincolnshire, Essex, Northamptonshire, Westmorland and Yorkshire.

Tite Prize 1913.—The Council have approved the work of Mr. Cyril A. Farey, who was awarded the Tite Prize in 1913 and travelled in Italy and Sicily.

Godwin Bursary 1911.—The Council have approved the work of Mr. Cecil Claude Brewer [*F.*], who was awarded the Godwin Bursary in 1911 and travelled in America.

Results of the Housing and Town Planning Act, 1909.

A Memorandum (No. 3) of the Local Government Board relative to the operation of the Housing, Town Planning, &c., Act, 1909, and the earlier housing Acts as amended by that Act has been issued as a White Paper [Cd. 7,206]. This Memorandum brings up to date some of the information furnished in the memoranda of November, 1911 and 1912 [Cd. 5,953 and Cd. 6,494], in which particulars were given of the operation of the Act and of results achieved under it, and which showed that the passing of the Act had produced considerable activity on the part of local authorities in regard to housing and town planning. The present Memorandum shows that the activity has increased materially during the year 1913.

The Memorandum states that the Board are satisfied that considerable progress has been made in most districts in the work of inspection of houses, and in the case of a few districts they have been informed that an inspection of all the houses has been completed. The regulations made by the Board contemplated that areas regarded as most in need of inspection should be dealt with first, and in many districts the result has been to secure the remedying of some of the worst conditions. In a large number of cases in which it does not appear that reasonable progress in regard to the inspection has been made the Board have impressed upon the local authorities the necessity of increased activity in this direction. The powers conferred by Section 15 of the Act of 1909 (notice to landlords to make houses fit for habitation) have been utilised very extensively by a number of local authorities, and there has been a substantial increase in the number of local authorities who have exercised these powers. From 3rd December 1909 to 31st March 1911 notices were issued in respect of 18,927 houses. In the year ended 31st March 1912 notices were issued in respect of 43,781 houses; and in the year ended 31st March 1913 notices were issued in respect of 51,915. In the first period notices were issued by 500 authorities, in the second period by 778 authorities, and in the third period by 865 authorities. In addition to the repairs and improvements effected to dwelling-houses by means of action under this section, local authorities have secured the execution of a large amount of work for the improvement of houses without resorting to formal notices under the Act. Moreover, the number of notices under the Public Health Acts for the removal of nuisances is very large, and the Memorandum claims that very distinct progress has been made during the past year in the direction of securing that houses shall be fit for habitation.

The action taken by local authorities in the provision of new houses since the passing of the Act of 1909 may be summarised as follows :—Loans to an amount exceeding 1,400,000*l.* have been sanctioned for the erection of 6,355 houses for the working classes. In addition there were, at the close of 1913, schemes under consideration by the Board, providing for the erection of some 1,360 more houses at a cost of some 350,000*l.* Thus the loans sanctioned or under consideration at the end of 1913 exceeded 1,750,000*l.*, and the schemes provide for the erection of more than 7,700 new houses by local authorities.

During the last two years there has been a considerable increase in the activity of local authorities, and the improvement is particularly noticeable in the case of rural districts. In the twenty years following the Housing Act of 1890 loans sanctioned to rural authorities amounted to less than 50,000*l.* The total for the last two years is more than five times that amount, or 255,397*l.*, while the total for 1913 alone considerably exceeds the whole amount sanctioned in previous years since 1890.

The Local Government Board have received and considered a number of complaints under Section 10 of the Act of 1909 as to local authorities not exercising their powers under the Act of 1890. The authorities, when communicated with, have usually shown themselves willing to comply with the Board's requirements, and only in one case was it necessary to make an order of default. Many complaints of an informal character also reach the Board, and they communicate with the local authorities thereon, and in some cases the Board have thought it desirable to undertake independent investigations of the housing conditions with a view to securing that improvements shall be made. The Board have also communicated with a large number of local authorities with a view to securing their attention to their duties and much good has resulted from this action. The increased activity indicated, though due largely to the desire of local authorities to effect improvements, may to a material extent, says the Memorandum, be directly traced to the administrative pressure of the Board.

The Memorandum gives in a brief form all the information in the possession of the Board as to the progress made by local authorities in regard to the preparation of town planning schemes. On 31st December 1913 two schemes submitted by one local authority and dealing with 3,762 acres had been finally approved by the Board. Three schemes affecting 6,503 acres had been prepared by three other local authorities and submitted to the Board for approval, and forty-seven schemes, affecting 70,900 acres, had been authorised by the Board to be prepared or adopted by thirty-seven local authorities. Applications from fourteen local authorities for authority to prepare fourteen schemes, affecting 29,761 acres, were under the consideration of the Board, and in seventeen other cases the Board had information that the preliminary notices had been given by local authorities with a view to applications being made for authority to prepare schemes. In 119 other cases the local authorities were known to the Board to have had the matter under consideration.

It is stated, in conclusion, that the regulations governing the procedure in regard to town planning schemes have been in force some three and a half years, and, in view of the experience gained and representations made in favour of certain amendments, the Board contemplate a revision of the regulations at an early date.

Registration of Architects.

Sir T. G. Jackson, Bart., R.A., asked to give his opinion on this subject, expresses himself as follows in the *British Architect* of the 16th January: "I can only say that I still hold the same opinion as of old, that the real object of the movement is to give the architect a sham respectability by means of a diploma. The protection of the public is a mere excuse to float it into favour. The public cannot be protected against bad architecture by any Act of Parliament whatever, and against bad building there are already safeguards enough—almost too many. What else are Building Acts and By-laws created for? Is it likely that if a body of men were issued to the public duly stamped and hall-marked as architects, By-laws would no more be necessary? The whole movement seems in my humble judgment fictitious: I might almost say dishonest. The cry is that the doctor and the attorney have diplomas, and belong to a closed profession which gives them a monopoly, why may we not have a diploma and a monopoly too, and keep all the plums for ourselves? We are told to think of the dignity of the profession, for which, personally, I do not care a straw. Every man will have the dignity and status which he deserves, and he has no right to any more. The motive underlying the movement is the advantage of the architect, not that of architecture, for which it would do nothing, unless indeed it does infinite harm by excluding genius and preventing men rising from the ranks who might do great things. Let us for Heaven's sake keep that liberty which I believe to be the heart of the position the English school holds, and I think deserves to hold, in European estimation, and which under State regulations and restrictions will assuredly wither and die."

London of the Future: a Vision.

Sir Aston Webb, K.C.V.O., C.B., R.A., in an address entitled "London of the Future" delivered at a dinner of the London Society last week, drew a dream picture of the London of 2014, a London from which smoke and dirt had been banished, and the waters of the Thames were so clean and pellucid that fishing for salmon and trout was carried on from embankments which lined both sides of the river, and there was a salmon weir at London Bridge. The bridge itself was like a street, with fine shops and beautiful houses on either side, and it helped to make Southwark as valuable as the Strand. St. Paul's Cathedral was still standing, and was safe for centuries. A law had been passed that no sewers or tunnels should pass within 150 yards of it. Party no longer entered into municipal politics, and so the south side of the river was embanked and many other things were done which formerly were left undone. Along this south embankment were other splendid buildings and picturesque warehouses arched over the roadway in accordance with a report prepared by the London Society. He remarked how bright and clean everything looked, and was told that this was because they had done away with the smoke and only used smokeless materials. Southwark had been rebuilt and the roofs of the houses were flat, and here the people sat in the summer evening on their roof gardens, looking over London twinkling in the evening sun. Cannon Street railway bridge and the bridges at Ludgate Hill and Charing Cross had been taken down, and the old glass railway termini also. Instead, two big terminal stations had been built, one for South and one for North London, and they were connected by a tunnel. In a bird's-eye view he obtained of London, he noticed that besides the railway tracks out of London there were great arterial roads stretching out in all directions. They were 120 feet wide, and there were two divisions, one for slow-moving and one for swift traffic. The tramways had been done away with, and the people had wireless telegraphy, wireless telephones, and wireless electric light. There was a belt of green round London, a sylvan glade formed out of various town-planning schemes. All these things were arranged by a Ministry of Art, who, assisted by a large committee of artists, had such matters referred to them. The housing problem had settled itself to a large extent, for, with the increase of facilities for getting in and out of London, people moved out further from the centre. Other improvements he saw and heard of were a Central Government of London, clean sewers, and the protection of old London. In fact this country, like France, had realised that Art was a great asset to any country and any city. On the west side of Trafalgar Square was a noble building occupied by the Ministry of Art, and over the portals was inscribed in bold letters, "Erected by the British Government to the Glory of British Art."

The Surrey Side of the Thames.

The Times of the 23rd inst., referring to the many beautiful features of Sir Aston Webb's vision, has a word to say for the Surrey side as we know it to-day. "It is just possible (it says) that the 'picturesque warehouses' which are to have a place among the 'splendid buildings' along that embankment may save it from being wholly unlike London—which is to say, wholly unworthy of London. Yet, however deliberately picturesque, will they replace what might almost be called the natural beauty of that jagged line of chimneys and towers and roofs which now delights the eye? To etchers and other artists in line the Surrey bank is an inexhaustible storehouse of delicious surprises. French painters know better than English the infinite variety of its aspects under the changing, softening skies of London. To the true Londoner it appeals, not more by its absolute beauty than by the force with which it declares itself to be London.

"London is a city of commerce; a city that has grown, instead of being 'laid out.' The Surrey bank is the visible sign of London's spirit. So far from welcoming the embankment of the Surrey shore, the lover of London would have warehouses opposite the Houses of Parliament, barges unloading the commonest of merchandise at their steps, and tugs (smokeless, if it may be so) wheeling and fussing within a stone's throw of the Terrace. The dull and pompous embankments of the Middlesex shore are there to prove how rich and orderly we are; on the other side the fascinating jumble of lines and masses tells the secret of our wealth. It speaks of men at work, of the homely needs of the body, of fetching and carrying, of making and buying and selling, of the ten thousand common duties, faithfully carried out, by which London has grown through immemorial ages to be the queen of all great cities of all time. To the lover of London this visible soul of London is no eyesore; it is a scene so inspiring and so beautiful that he hates to see it disfigured at night with sky-signs only fit for upstart towns that have no spirit to scare away. And London is a city by the sea. . . . We are in the capital city of an island; all round the shores of that island the ocean is moving. Cross it, if only in fancy, and there are vaster shores and vaster rivers, with the ocean still flowing to and fro about them, and London still their centre. There are many great cities in the world; there is only one London. Destroy her Surrey shore, and she will be so much the less London; so much the more a mere great city."

No. 75 Dean Street: A Plea for the "Arts and Crafts."

It is matter for congratulation that the prompt action of the Office of Works in administering the Ancient Monuments Consolidation and Amendment Act of 1913 has preserved from immediate demolition the fine old house No. 75 Dean Street, Soho. A movement is on foot to secure the building as the permanent home of the Arts and Crafts Exhibition Society, which has contributed so largely towards the maintenance of a high standard in design and workmanship in contemporary decorative art of all kinds. Mr. Edward Warren, F.S.A. [*F.*], in an admirable letter to *The Times* of the 20th inst., puts forward the following eloquent plea on the Society's behalf:—

> The quiet stateliness and harmonious charm of the old house, its fine staircase, its unique painting of wall and ceiling, its panelled chambers and dignified chimney-pieces, its tradition as the home of Thornhill and the haunt of Hogarth, all suggest as appropriate tenants some society of artists to whom its intrinsic beauty and its associations would be of inestimable value. Its newly invested character as a national monument suggests its bestowal upon a society typically national and worthy of national support. The Arts and Crafts Exhibition Society seems to fulfil those conditions in a high degree. That Society is in pressing need of a permanent home if it is to continue and to develop its utility. By all that it has done and is doing to raise the standard of British arts and crafts it has shown itself worthy, not only of being handsomely housed, but also of being encouraged in work which is of great national importance. It is chiefly due to this Society, and to the group of artists which it represents, that this country has achieved that well-recognised pre-eminence in the decorative arts so fully exemplified in its own periodic exhibitions and in various international exhibitions abroad. The recent and most conspicuous success of the British Arts and Crafts Section at Ghent, and the admiration and interest excited thereby amongst foreign artists, have led to a very general recognition of the necessity of some place of permanent exhibition, so that all the world may know where to go to in order to see the best examples of contemporary British craftsmanship and get into touch with its producers. Continental visitors to London frequently express disappointment and surprise that they can only hope to inspect such productions by undertaking impossible journeys to isolated workshops and studios.
>
> The amplitude of the straight old "garden," or back yard, in the rear of No. 75 would provide space for a well-lit hall very suitable for a continuous exhibition, while some of the fine old rooms could contain a selection of more permanent exhibits, in furniture and the like, and others might be devoted to use as library and lecture-rooms and the necessary offices. The Arts and Crafts Exhibition Society is, like most artistic societies, relatively poor, and would only undertake the occupancy and care of such premises under the guarantee of generous public or private support. An epoch has now been made by this spirited action of a Government Department in the recognition of the national value of a beautiful old house; it only remains to confirm the results of that action with equal spirit in the domain of practical utility by securing its endowed and sympathetic maintenance.

Mr. Walter Crane [*Hon. A.*], the present President of the Society, has followed up Mr. Warren's letter with an equally powerful appeal, pointing out that the Society has numbered among its members most of the more distinguished decorative artists and craftsmen (including eminent architects and sculptors) from William Morris and Sir E. Burne-Jones to the artists of our own day. The teaching in the design and craft classes in the various technological institutes and municipal art schools of the country has been largely in the hands of their members, as well as the judging in the national competition of students' works under the Board of Education.

"But now," he says, "after a quarter of a century's work, our Society finds itself crippled for want of funds. The heavy expenses of our London exhibitions, especially the item of rent of a gallery, have reduced our resources so much that it will be impossible for us to avail ourselves of this suggestion of occupying No. 75 Dean Street unless we are supported financially in some way. It might take the form of guarantees, or a grant of premises rent free by the Government." He adds that their Hon. Treasurer, Mr. St. John Hornby (the producer of some of our choicest printed books), would be very pleased to hear from anyone interested in their work sufficiently to offer financial help.

The Hon. Secretary is Professor E. S. Prior [*F.*], Slade Professor at Cambridge University.

E E

Architecture and Efficiency.

A lecture, entitled "Architecture and Efficiency," was delivered at Sheffield University last Saturday by Mr. W. S. Purchon [*A.*], the Lecturer on Architecture at the University.

Mr. Purchon said that the real meaning of the works of architecture of the past was rarely grasped. The ancient Greek temples, for instance, were seen to possess great beauty of proportion and remarkable refinement of detail, and the wonderful buildings of the Romans were rightly admired for their grandeur; but what was seldom grasped was the struggle towards perfect efficiency that was taking place when the buildings were being erected—the attempt to make the very best building for the definite purpose to which the building would ultimately be put. The deeper beauty which lay beneath the surface was rarely seen.

The misunderstandings which had gathered about the art of architecture led to much trouble during the eighteenth and nineteenth centuries, in England and elsewhere. It was seen that the great buildings of the past were full of beauty, but it was not realised how much of their beauty was due to the fact that they were efficient solutions of definite problems—problems in which the local climate, the customs of the times, and the particular sites on which they were created played a considerable part. Instead of seeing their own problem clearly and trying to arrive at the most efficient solution, the architects of the various revivals effected important factors in their own problem so that the general appearance of the building should resemble some famous architectural masterpiece. Unfortunately their method of designing was still lingering on in some quarters, fitting in with another great misunderstanding—that architecture was an art which belonged to distant times and places.

Discussing some present-day problems, the lecturer referred to dwelling-houses, perhaps of all buildings the most important. There were still some sixteen thousand back-to-back houses in Sheffield. How did the accommodation in those houses compare with that in workhouses and prisons? How did it compare with that provided for racehorses? Back-to-back stables were not built. Engineering plant must be efficient, and when superseded, it must be scrapped; but we were not ready enough to scrap out-of-date, inefficient houses, the possession of which was not economy, but a gross extravagance, which gave pleasure to no one and which no community was wealthy enough to afford. Yet he supposed in every community there was a standard below which a house must not fall, or it would be closed as unfit for human habitation. Evidently it was necessary for that standard to be raised, and to be raised considerably.

As regards the general appearance of dwelling-houses, the lecturer said that for a house to be really efficient the front should be beautiful and the back no less so. It was not necessarily more expensive to make a house pleasing in appearance than otherwise. He had seen many a house which could have been built more cheaply and yet made more beautiful.

To a great extent beauty in architecture was a matter of arrangement of forms and proportion, and good proportion was not necessarily more expensive than bad. In addition to the sanitary point of view in the siting of houses, there was an æsthetic side to the question. Long rows of small houses, however well designed, tended to become wearisome and monotonous—and they were rarely well designed.

The problem of the shop was by no means an easy one. So many of the streets of our cities were ruined by the modern shop-fronts, which consisted of nothing but plate-glass. Fortunately shopkeepers were in increasing numbers realising that beautiful goods showed to better advantage in a beautiful frame than in an ugly one. They were, in fact, actually discovering that there was money in architecture! It was not a lofty argument, but it was a sound one.

Speaking of the refining influence of architecture, Mr. Purchon said he was willing to admit that many intelligent people derived little conscious pleasure from architecture or felt little dissatisfaction at the sight of an ugly building, but he was convinced they were influenced by the buildings which surrounded them, though perhaps without knowing it.

"Architecture," he concluded, "is a matter which concerns all of us, here and now. It is not a matter of going somewhere to see something. It ought to be all around us, and if it is not we ought to want it, and we ought to let our wants be known clearly and definitely. We are thorough in some things: we want the best in machinery, motor-cars, and railway engines, but for some reason we seem more or less willing to put up with terribly inefficient buildings and towns. In Sheffield little thought seems to have been spent in arranging buildings as part of a complete scheme. We have no roads leading up to our main buildings, the stations are buried away as if they were things we must tolerate but do not like, and we have by no means made the best of the opportunities provided by our beautiful situation.

"In judging the success of Sheffield it is not enough to talk about the development of the steel industries. Surely prosperity in such work should lead to the living of fuller and nobler lives, and should show outwardly in the general appearance of the city. I understand we are to have town planning in two suburbs, and a new road here and there, but I firmly believe it is little good doing odd bits in Sheffield. What is needed first is a complete scheme for the ultimate development of the whole city, and our energies ought to be devoted to that rather than frittered away on oddments. If we do the oddments first—as we probably shall—when the complete scheme is considered, as it ought to be now, but probably will be in ten, twenty, or fifty years, the oddments done in the interval will probably have to be scrapped, and during the next fifty years large portions of the city must be rebuilt.

"The whole scheme must be dealt with some day, there is no escaping that. Why not now, before more streets are laid out in the wrong places, before more new buildings are erected where streets ought to be cut through or where open spaces ought to be arranged? Think for a moment what Sheffield would be like now had Sheffielders fifty years ago realised to the full the value of efficiency in architecture, had they tackled the problem with a broad mind, obtained the best possible advice, and developed Sheffield on the right lines during those fifty years. If we think of this I believe we shall realise how our work will be appreciated in, say, fifty years' time if we tackle this great problem thoroughly and now."

"Société Archéologique de France": a Warning.

A Fellow calls attention to the announcement in the JOURNAL of 20th December that an Honorary Associate of the Institute has been elected a member of the "Société Archéologique de France," and to a similar announcement about a Fellow which recently appeared in one of the architectural journals, and suggests that any members who may

be approached by this "society" should be warned to make inquiry before they are induced to join it. *The Athenæum* of the 17th January (p. 98) contained the following paragraph on the subject :—

We are informed that certain persons calling themselves the "Société archéologique de France," and operating from 5, Rue de Mornay, Paris, have been writing to English professors and archeologists and informing them that they have been elected corresponding members, and demanding a payment for the "honour." It may be well to issue a warning that this so-called "Société" is not in any real sense an archæological society at all, that it has never published any transactions, and that its diplomas are of no value. It should not be confused with the Société française d'archéologie, founded by A. de Caumont in 1834, now publishing its seventy-seventh volume of the *Bulletin Monumental*, and prospering greatly under the able presidency of M. Lefèvre-Pontalis.

"Country Life" Cottage Competition.

It will be remembered that Viscount Milner in his speech at the Opening Meeting of the Session referred to the correspondence in *Country Life* on the subject of cottage design, and the importance of avoiding anything like a standard pattern being used all over the country. In order to emphasise the possibility of building new cottages on traditional lines, *Country Life* has organised an important competition, the full particulars of which were published in its issue of the 10th January. Eighteen landowners, all of them men associated with the attempt to improve housing conditions, have each agreed to build a pair of cottages in their respective counties in accordance with the design which will receive the prize of twenty-five guineas for each type. The eighteen successful competitors will also receive their fees in the ordinary way from the landowners. The date for sending in designs has been extended to the 14th March. Further details are given in the advertisement pages of the present issue of the JOURNAL.

The Alexander Thomson Travelling Studentship.

The Trustees of the Alexander Thomson Memorial offer a prize of £60 for the best set of drawings for a College Memorial Lecture Hall, which should be a detached building, but connected with other parts of the college by open portico, covered corridor, or walk architecturally treated. A prize of £20 will be given for the second best set of drawings should the number of competitors and the quality of the work submitted be such as to warrant an additional prize being given. The competition is open to architectural students between the ages of 19 and 28 years, residing in the United Kingdom. The Trustees are the Council of the Glasgow Institute of Architects, and full particulars may be obtained from the Secretary, Mr. C. J. Maclean, 115 St. Vincent Street, Glasgow.

Garden Cities and Town Planning Association.

The Fifteenth Annual General Meeting of this Association will be held in the Carpenters' Hall, London Wall, E.C., on Monday, 16th February, 1914. At 4 p.m. Mr. Cecil Harmsworth, M.P. (Chairman of Council), and Mrs. Cecil Harmsworth will receive members and friends, and tea will be served. The Annual Business Meeting will begin at 4.30 p.m., and at the public meeting at 5 o'clock Lord Robert Cecil, M.P., will be the chief speaker. There will be a short lantern lecture illustrating the present position of the movement. Cards of admission to the meetings can be obtained from Mr. Ewart G. Culpin, 3 Gray's Inn Place, W.C.

New Public Offices Competition.

It is announced from the Office of Works that 187 designs have been sent in for the proposed new public offices on the Embankment at the rear of the Chapel Royal, Whitehall. Ten designs will be selected for the final competition, and each of the authors will receive the sum of £300. The assessors are Sir Aston Webb, R.A., and Messrs. Reginald Blomfield, A.R.A., and Ernest Newton, A.R.A.

CORRESPONDENCE.

REGISTRATION.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I find that there is an impression in some quarters that, when speaking at the meeting on 5th January on the subject of Registration, I did so as the spokesman and accredited representative of the Society of Architects. This was not the case, my action both then and in giving notice of motion (afterwards withdrawn) for 12th January having been purely personal. For thirty years the great object of my life has been to see architecture made a closed profession by Act of Parliament, and with that end in view, when yet little more than a boy and when no other possible course seemed open, I assisted in forming and organising the Society. The great work of that body has been the formulation and gradual perfecting of a Registration Bill, and it has been my great anxiety to see that measure placed upon the Statute-book that has led to my recent, as to most of my past, actions ; not in order to advertise the Society, but simply because I believe the Bill to represent the requirements of the situation in the most complete and soundest manner, and consider that it is a measure which ought to go forward with universal consent, and not as a party matter. For the Institute to solidify its position by Charter amendments is good, and to the advantage of architecture, but to my thinking no Charter provisions can, in their ultimate effect, at all approach, in the matter of this same architectural advance, what could be secured by Parliamentary action. And I

am by no means pessimistic as to the possibility of securing the passing of a well devised Bill, especially now that the necessity for it, or something as near to it as can be secured, is universally acknowledged.—I am, &c.,

G. A. T. MIDDLETON [*A.*].

3 *Queen Street, E.C.: 20th Jan.* 1914.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—I wonder if a mere Licentiate may express opinions upon the above subject? I have carefully read the discussion and have also considered certain literature upon the subject not published in the pages of the JOURNAL. I agree with Mr. Topley, and if I paraphrase one of the sentences of his speech I shall express what I feel to be the fundamental issue. "If the Parliamentary registration movement is to improve the material condition of architects I am opposed to it; but if it is recommended as a measure for improving architecture in this country then I support it."

The discussions which have taken place during the last few years do not seem to me to have made it very clear whether the majority of those who support registration do so in Mr. Topley's spirit, or in a vain hope that they may derive some personal benefit; nor do those who have changed their views let us into the secret as to whether they have abandoned the idea of registration because they now feel that it would be bad for architecture, or merely because it is impossible of attainment.

If registration would be good for architecture, in the opinion of the leaders of the profession, then I cannot imagine why they should give up the idea of eventually attaining their desire because for the moment they are advised that it is impossible. I am personally quite convinced that registration is not practical politics, but as I am inclined to think that registration would be for the ultimate improvement of architecture in this country I do not think that I should definitely give up the idea of some day obtaining it, were I a leader.

In face of the vote given at the Institute on the 5th January last the chances of the success of the crusade of the Society of Architects are set back a generation. Parliament certainly could not grant registration at the request of the Society after such a vote in the Institute. Registration is dead for a generation; all the Institute has to do now with regard to it, is to consider whether the Institute policy shall be shaped to educate to that end, or whether registration would be better buried as far as the Institute is concerned.

If the latter course is the policy of the Institute then the Society of Architects can be ignored, but if the former is the proper course it seems to me quite essential that the Society should modify its crusade (recognising the fact that at least for the present registration is NOT practical politics) and work hand in hand with the Institute.—Faithfully yours, JOHN E. YERBURY, *Licentiate.*

THE EXAMINATIONS.

Preliminary.

The Preliminary Examination, qualifying for registration as Probationer R.I.B.A., was held in London and the under-mentioned provincial cities on the 25th and 26th November. Of the 115 candidates admitted, 33 were exempted from sitting, and the remaining 83 examined, with the following results:—

Centre	Examined	Passed	Relegated
London . . .	34	22	12
Birmingham . .	13	11	2
Bristol . . .	9	7	2
Leeds . . .	7	6	1
Liverpool . .	6	5	1
Manchester . .	13	7	6
	82	58	24

The 91 passed and exempted candidates are as follows:—

BAKER: Maurice; Portland Villas, Glencoe Road, Sheffield.
BASTABLE: Francis John Norman; 24 The Grove, Golder's Green, N.W.
BAYLISS: † Cecil Charles; 25 Esmé Road, Sparkhill, Birmingham.
BEARD: Philip Arthur Edgar; 19 Augustus Road, Hammersmith, W.
BELL: Fred; 76 Moorland Road, Scarborough.
BENGE: Arthur Norman; Crescent House, Gravesend.
BOWEN: William Archer Forrest; "Overdale," Rigby † Lane, Bradshaw, Bolton.
BROWN: James McLellan; Green Street, Stonehouse, Scotland.
BURNET: Edith Mary Wardlaw; 59 Queen's Road, Aberdeen.
BUTLIN: Frederick George Montague; Upton Lodge, Harpenden, Herts.
CARRUTHERS: Robert Ballantyne; 27 St. Mark's Crescent, Regent's Park, N.W.
CHASE: Arthur Gordon; 11 Holligrave Road, Bromley.
CHOLMELEY: Guy Hargreaves; 19 Hamilton Terrace, London, N.W.
CLAYDON: Lifford; 9 High Street, Tunbridge Wells.
CLOUSTON: James George; 119 Wise Road, Stratford.
COCK: Geoffrey Horneblower; Ridgebourne, Shrewsbury.
COCK: John Charles Pascoe; 8 Maristow Avenue, Keyham, Devonport.
CONNABEER: Cecil Randolph; "Rozel," 37 Dowsett Avenue, Southend-on-Sea.
CORDINGLEY: Reginald Annandale; Temple Farm, Temple Road, Sale, Manchester.
COUCHMAN: Harold William; Mount Pleasant House, Tottenham.
CREGEEN: Cyril Arthur; Oakhurst, Port St. Mary, Isle of Man.
CRICK: William Edward; Nine Springs, Cliftonville, Northampton.
CROSTHWAITE: William James; 24 Victoria Terrace, Windermere.
CUNDALL: Philip; Coniston, Broad Road, Sale, near Manchester.
DAVIDGE: Henry Edward John; 23 Rydal Road, Streatham, S.W.
DEY: Birendra Nath; 36 Otago Street, Glasgow.
DHAMA: Bhanwar Lall; Royal Palace Works, Hyderabad Deccan (Nizam's Dominion), India.
EPBILE: Cecil Jacob; 9 Aldbourne Road, Oldoak Road, Shepherd's Bush, W.

FINCH: Walter Badgery; "Croissy," Ferry Street, Hunter's Hill, Sydney, N.S.W.
FITCH: Cyril Henry; 48 Beauval Road, East Dulwich, S.E.
FRITH: Henry George; 45 Partridge Road, Cardiff.
GALSWORTHY: Gerald Richmond; 181 Gloucester Terrace, Hyde Park, W.
GARDNER: Eric Knight; 15 York Road, Leamington.
GARLICK: Albert John; 61A Stoney Stanton Road, Coventry.
GODFREY: Frederick William; 23 Lilyville Road, Fulham, S.W.
GOURLAY: William; 2 Balmoral Terrace, Queen's Park, Glasgow.
GUEST: John Eric Cox; Highcroft, Etchingham Park Road, Finchley, N.
GUNSTON: Edward Leslie; "Alpenrose," Kidmore, near Reading.
HALFHIDE: Frederic William; "Ronda," 47 Prentis Road, Streatham, S.W.
HAMILTON: Ian Bogle Monteith; 6 St. Alban's Mansions, Kensington Court Gardens, Kensington, W.
HARDY: Thomas Charles; 15 Carmichael Place, Langside, Glasgow.
HARRISON: Austen St. Barbe; Amery, Beckenham, Kent.
HATTON: John; Wentworth Road, Sutton Coldfield.
HEMMINGS: Walter; Hill Chorlton, Newcastle, Staffs.
HOLYOAK: Frank; The Castle, Winchester, Hants.
HOPKINS: Wilfrid Walter; 52 Teviot Street, South Bromley, E.
HOWELL: Roland Basil; 14 Glebe Road, Reading.
HUTCHESON: Thomas Francis Tamplin; The Saffrons, Saffron Walden, Essex.
IRWIN: Stephen Fenemore; 10 Grange Road, Kingston-on-Thames.
JONES: George Frederick; 12 Tudor Terrace, Aberdare, S. Wales.
KELLOCK: Andrew Duncan; 3 Melville Street, Portobello, Edinburgh.
LANGHAM: Geoffrey Daykin; 46 Kirby Road, Leicester.
LAWRENCE: Haydn George; 227 Rye Lane, Peckham, S.E.
LLOYD: Wynell Hastings; 44 Paulton's Square, Chelsea, S.W.
LOMAX: Alan; 181 Bolton Road, Radcliffe, near Manchester.
LONDON: Douglas Norman; "Berkeley Dale," Wotton Without, Gloucester.
LONG: William Dickson; 49 Frederick Street, Sunderland.
LOVE: Castor Jennings; Irish Street, Downpatrick, County Down.
LOWTHER: Cyril George Aloysius Benedict; Swindon Villa, Cardigan Road, Bridlington.
LOWY: Ethel Leah; 76 Holland Park, W.
MACPHERSON: Archibald Austin; 20 Thirlestane Road, Edinburgh.
MASON: Basil; Spencer Cottage, Leeds.
MAYMAN: Edward James; 2 Arthur Place, Summer Hill Terrace, Birmingham.
MITCHELL: Denis Stuart; 28 Priory Avenue, Hastings, Sussex.
MOESCH: Carl Eric Wilson; 10 Roslyn Terrace, Douglas, Isle of Man.
NAPIER: Donald Charles; 5 Wellington Terrace, Taunton.
OSWELL: Harold Lloyd; Dana Chambers, Shrewsbury.
PALMER: Kenneth; "Kingswood," The Avenue, Sheringham, Norfolk.
PEARCE: John Morley; 1 Unity Street, College Green, Bristol.
PHILP: Arthur Thomas; 34 Alderney Street, S.W.
PHILP: Richard Manning Haig; London Bank of Australia, Ltd., 71 Old Broad Street, E.C.
PORTER: Douglas Greenslade; 4U Bickenhall Mansions, Gloucester Place, W.
PROSSER: Donald Sydney; 37 Westbourne Road, Penarth, near Cardiff.
RECKLESS: Fredrick Henry, jun.; 35 Walton Road, Ecclesall, Sheffield.
REYNOLDS: Ernest Leoline; Brynteg House, Aberdare.
ROBERTS: David Henry; 82 Park Street, Wombwell, Barnsley.
SANDERS: John Edward; 208 Boaler Street, Liverpool.
SHARP: Francis George; 2 Station Hill, Winchester.
SHEARER: Thomas Smith; 75 Limerston Street, Chelsea, S.W.
SINGH: Kirpál; c/o Messrs. Thomas Cook & Son, Ludgate Circus, E.C.
SMITH: Reginald James Blampey; "Meads," Priory Road, Kenilworth, Warwickshire.
SMITH: William Richard Love; 36 Byron Street, Kingsley Park, Northampton.
STEWART: Cuthbert Bertram; 29 Stanhope Road, Darlington.
SYKES: Joseph Naylor; Beech Street, Stainland, near Halifax, Yorks.
WALKER: Alfred Leslie; Englefield, Homer Road, Solihull, Birmingham.
WATT: William James; School of Architecture, Aberdeen.
WESTWOOD: Walter Raymond; 306 Rotton Park Road, Edgbaston, Birmingham.
WILLETT: Sydney; 18 Reynolds Road, Old Trafford, Manchester.
WISEMAN: Arthur Eric; 26 Broomfield Road, Chelmsford.
WOOD: Leslie; 12 Waverley Terrace, Hipperholme, near Halifax.
WOOD: Thomas Spencer; Hawthorne House, Handsworth Wood, near Birmingham.

Intermediate.

The Intermediate Examination, qualifying for registration as Student R.I.B.A., was held in London and the under-mentioned provincial cities from the 21st to the 28th November. Sixty-nine candidates were examined, with the following results:—

Centre	Number Examined	Passed	Relegated
London	43	26	17
Bristol	3	1	2
Glasgow	3	3	—
Leeds	1	1	—
Liverpool	4	2	2
Manchester	12	7	5
Newcastle	3	2	1
	69	42	27

The passed candidates are as follows, the names being given in order of merit:—

[*P.* = Probationer.]

BONE: John Craigie [*P.* 1910]; 45 Marchmont Road, Edinburgh.
HULL: James Vincent [*P.* 1908]; Lofthouse, nr. Garstang, Lancs.
FOSTER: Frank Geden [*P.* 1910]; 3 The Crescent, Selby.
BESTOW: Sidney Francis [*P.* 1906]; 43 Upper Clapton Road, N.E.
SAXON: Frederick Charles [*P.* 1908]; 17 St. Alban's Street, Rochdale.
HENDRY: Morrison [*P.* 1912]; 3 Pitstruan Place, Aberdeen.
MACKAY: Harry [*P.* 1910]; 10 Clonmel Road, Fulham, S.W.

HOSSACK: James Davidson [*P.* 1912]; Bloomsbury House Club, Cartwright Gardens, Tavistock Square, W.C.
HANBURY: Philip Henry [*P.* 1908]; Glendale, Bloomfield Road, Bath.
BONIFACE: Charley Frank [*P.* 1906]; "Polperro," King George Avenue, Petersfield.
LYNE: Daniel Roy [*P.* 1905]; c/o C. J. W. Simpson, Esq., 12 Queen Anne's Gate, S.W.
DOYLE: Edmund Louis [*P.* 1912]; 39 Esmond Road, Cheetham Hill, Manchester.
PICTON: Clarence Spencer [*P.* 1912]; 73 St. Donatt's Road, New Cross, S.E.
WARDILL: Reginald William [*P.* 1909]; Glaisdale, Hill Road, Chelmsford.
GARRARD: Cyril Proctor [*P.* 1908]; Ivydene, Westerfield, Ipswich.
ASHMAN: Herbert William [*P.* 1907]; 13, "Linden," Palace Road, East Molesey.
CHURCH: Leslie Donald Algar [*P.* 1910]; The Homestead, High Road, Epping.
DAVIES: John Percival Wilkin [*P.* 1907]; 46 St. John's Road, Newport, Mon.
PAICE: Cyril Lawrence [*P.* 1912]; Aldermaston, Mill Road, Cromer.
GRAHAM: Richard David [*P.* 1910]; Northern Bank House, Carrickfergus, Co. Antrim.
DUCKWORTH: Alfred [*P.* 1910]; 341 Blackburn Road, Accrington.
LOWETH: Sidney Harold [*P.* 1911]; 67 Downs Park Road, Hackney Downs, N.E.
KNIGHT: Shirley [*P.* 1907]; 4 The Crescent, Phippsville, Northampton.
BISIKER: Arthur Milton [*P.* 1911]; 60 Crouch Hall Road, Crouch End, N.
SHENSTONE: Gerald [*P.* 1910]; "Waveney," 191 Hainault Road, Leytonstone, N.E.
ASHBY: Leslie John [*P.* 1912]; 308 Mansfield Road, Nottingham.
ROUTLEY: Leonard James [*P.* 1911]; 17 Cleveland Street, Taunton.
ALLCORN: William John [*P.* 1912]; The Pinnacles, Shipbourne, near Tonbridge, Kent.
APPLEBY: Sidney Derrick [*P.* 1910]; "Selwyn," Gilnow Park, Bolton.
ARMSTRONG: John Ramsay [*P.* 1912]; 24 Ettrick Terrace, Hawick, N.B.
BONSER: Kenneth John [*P.* 1911]; 160 East Dulwich Grove, S.E.
BRUCE: John Clayton Collingwood [*P.* 1909]; 12 Lovaine Place, Newcastle-upon-Tyne.
CHERITON: William George Lloyd [*P.* 1906]; 20 Mount Ephraim Lane, Streatham, S.W.
GILL: Maurice Bernard [*P.* 1910]; 150 Weston Park Crouch End, N.
JOHNSON: Arthur Gerald [*P.* 1909]; 146 Hainault Road, Leytonstone, N.E.
KASSEM: Hussein Zaki [*P.* 1912]; 17 Egerton Road, Fallowfield, Manchester.
LEADAM: Evelyn Grahame Seaton [*P.* 1912]; 25 Nevern Square, S.W.
MARTIN: Joseph Parnell [*P.* 1912]; 90 Southfield Road, Bedford Park, W.
RADCLIFFE: James [*P.* 1911]; Furlane, Greenfield, *via* Oldham.
STOBBART: Foster Rowland [*P.* 1911]; "Harewood," Grange Road, Newcastle-on-Tyne.
TURNER: Thomas Edwin [*P.* 1906]; 16 St. Matthew's Avenue, Surbiton, Surrey.
WOOD: Arthur Jackson [*P.* 1908]; 54 St. Nicholas Street, Leicester.

The number of failures among the relegated candidates in each subject of the Intermediate Examination was as follows:—

A. Principal Styles and General History of Architecture	12
B. 1. Simple Applied Construction	14
B. 2. Theoretical Construction	15
C. 1. Historical Architecture:—	
(*a*) Greek and Roman	3
(*b*) Byzantine and Romanesque	—
(*c*) French and English Gothic	—
(*d*) Italian, French, and English Renaissance	—
C. 2. Mathematics and Mechanics	1
C. 3. Design	16

Exemptions from the Intermediate.

The following Probationers possessing the certificates required under the regulations were exempted from the Intermediate Examination, and have been registered as Students, viz.:—

ADDEY: Frederick Arnold [*P.* 1910]; 28 Penywern Road, Earl's Court, S.W. [Architectural Association, Third Year Course.]
BINNIE: William Bryce [*P.* 1905]; 7 Alfred Place, South Kensington, S.W. [Senior Certificate, Glasgow School of Architecture.]
BRADSHAW: Harold Chalton [*P.* 1911]; "Hillside," 30 Heathfield Road, Wavertree, Liverpool. [1st Class Certificate, Liverpool School of Architecture.]
DAVIES: Edward Cecil [*P.* 1909]; 22 Lansdowne Road, Bedford. [Architectural Association, Third Year Day School Certificate.]
GEE: Ernest [*P.* 1910]; Cathedral Chambers, Chester. [1st Class Certificate, Liverpool School of Architecture.]
HAMILTON: Ian Bogle Monteith [*P.* 1913]; 6 St. Alban's Mansions, Kensington Court Gardens, Kensington, W. [1st Class Certificate, University College, London University.]
HOOPER: Arnold Fielder [*P.* 1912]; Kelsey Corner, Beckenham. [Architectural Association, Third Year Day School Certificate.]
HOWCROFT: Gilbert Burdett, B.A. [*P.* 1912]; Spring Grove, Uppermill, near Oldham. [Victoria University of Manchester.]
KELLOCK: Andrew Duncan [*P.* 1913]; 3 Melville Street, Portobello, Edinburgh. [Diploma in Architecture, Edinburgh College of Art.]
MACPHERSON: Archibald Austin [*P.* 1913]; 20 Thirlestane Road, Edinburgh. [Diploma in Architecture, Edinburgh College of Art.]
NEWBOULT: Bernard [*P.* 1911]; Thorn Lea, Shipley, Yorks. [1st Class Certificate, Liverpool University.]
PHILP: Richard Manning Haig [*P.* 1913]; London Bank of Australia, 71 Old Broad Street, E.C. [Architectural Assoc., Third Year Day School Certificate.]
SHIBLEY: Albert Reginald Slater [*P.* 1911]; Belmont, Waterbank Road, Sheringham, Norfolk. [1st Class Certificate, Liverpool University.]
TEBBUTT: Henry Jemson [*P.* 1910]; Architectural Association, 18 Tufton Street, Westminster, S.W. [Architectural Association, Third Year Day School Certificate.]
VINCENT: Sybil Aimée [*P.* 1910]; 78 Hampstead Way, N.W. [1st Class Certificate, University College, London.]
WALLACE: Robert Stuart [*P.* 1910]; 18 Marlborough Place, London, N.W. [Architectural Association, Third Year Day School Certificate.]
WHITEHEAD: Henry Montagu [*P.* 1910]; 18 Boston Road, Brentford. [Architectural Association Four Years' Course.]
WILSON: Joseph [*P.* 1913]; 6 Jedburgh Gardens, near Kelvinside, Glasgow. [Diploma, Glasgow School of Architecture.]

Final and Special.

The Final and Special Examinations, qualifying for candidature as Associate R.I B.A., were held in London from the 4th to the 12th December. One hundred and seventeen candidates were examined, 63 passed, and the remaining 54 were relegated. The passed candidates are as follows :—

ADAMS : Laurence Kingston, M.A. Liverpool [*S.* 1906]; Wyndcliffe, Westbourne Road, Birkdale, Lancs.
AYLWIN : Guy Maxwell [*S.* 1911]; 44 Fortune Green Road, West Hampstead, N.W.
BASKERVILLE : John Allbut [*S.* 1908]; 19 Delaunay's Road, Crumpsall, Manchester.
BENNETT : Philip Dennis [*S.* 1911]; 52 Farquhar Road, Edgbaston, Birmingham.
BIRNSTINGL : Harry Joseph [*S.* 1912]; 5 Pembroke Gardens, Kensington, W.
BOX : Charles Wilfrid [*S.* 1909]; The Vicarage, South Benfleet, Essex.
BULL : Joseph William [*S.* 1912]; 2 Tokenhouse Buildings, Bank, E.C.
CALVERT : Charles Henry [*S.* 1908]; 18 Low Pavement, Nottingham.
COOK : John Oliver, jun. [*S.* 1904]; "Lalcham," Clarence Road, Clapham Park, S.W.
COOPER : James Gough [*S.* 1912]; 19 Chorley New Park, Bolton.
CROMIE : Robert [*S.* 1909]; c/o W. Darlington, Esq., Clevelode, Great Malvern, Worcestershire.
CRONE : Harold [*S.* 1911]; 10 Great Ormond Street, Bloomsbury, W.C.
CULLIFORD : Leonard Arthur [*S.* 1909]; 8 Meriden Street, Coventry.
DAVIDSON : Oswald Ferguson [*S.* 1908]; The Bungalow, Roseworth Avenue, Gosforth, Newcastle-on-Tyne.
DAWSON : William Frederick [*S.* 1907]; "Filesfold," Lidgett Lane, Gledhow, Leeds.
DOD : Harold Alfred [*S.* 1909]; 24 Liverpool Road, Birkdale, Lancashire.
ENGLAND : Ernest Sugden [*Special*]; 95 Greengate Street, Oldham.
FISHER : Stanley Howe [*S.* 1911]; "Elmsthorpe," 37 Barrington Road, S.W.
FOGGITT : George Herbert, A.R.C.A. [*S.* 1907]. Tite Prizeman 1911; Ashfield, Yeadon, near Leeds.
FRISKIN : William Wallace [*S.* 1913]; 182 Kensington Park Road, Notting Hill, W.
GAYMER : Bernard Preston [*S.* 1912]; "Birchwood," North Walsham, Norfolk.
GIBBS : Harry Beckett Swift [*S.* 1911]; 7 Riverdale Road, Sheffield.
GRICE : William Stanley [*S.* 1911]; Chapel House, Mattock Lane, Ealing, W.
GUTTERIDGE : Richard Howard [*S.* 1912]; 150 Cheapside, E.C.
HARRIS : Philip Capes [*S.* 1910]; 23 Parliament Hill, Hampstead, N.W.
HARTMANN : Carl Herbert [*S.* 1908]; 10 Lancaster Place, Strand, W.C.
HATCHARD-SMITH : William Hornby [*Special*]; 76 Watling Street, E.C.
HAWLEY : Charles Dearman [*S.* 1908]; 65 Harlesden Gardens, N.W.
HEAL : Albert Victor [*S.* 1910]; 3 St. Stephen's Gardens, E. Twickenham.
HITCH : John Oliver Brook [*S.* 1913]; 60 Harleyford Road, Vauxhall, S.W.
HOLLAND : Harry Dawber [*S.* 1909]; 349 Spring Bank, Pemberton, Wigan.
HUGHES : Vernon Hugh [*S.* 1911]; "Corunna," Sandgate, Kent.
JELLEY : Frederick Richard [*S.* 1909]; 5 Bath Place, Bayswater, W.
JONES : George Howard [*S.* 1905]; 90 Fawnbrake Avenue, Herne Hill, S.E.
JONES : Herbert [*S.* 1909]; Oaklands, Wellington Road, Whalley Range, Manchester.
JONES : Walter Sydney [*S.* 1910]; "Ingham," Holland Avenue, Sutton, Surrey.
KIMPTON : Charles Stanley [*Special*]; Sunningdale, Ascot.
KNAPP-FISHER : Arthur Bedford [*S.* 1909]; 28 St. Mary Abbott's Terrace, Kensington, W.
LEIGHTON : Henry Birkett [*S.* 1912]; 68 Upper Albert Road, Meersbrook, Sheffield.
LOWCOCK : Arnold [*S.* 1910]; Poplar House, Dronfield, near Sheffield.
LOWES : Albert Edward [*S.* 1910]; 31 Swindon Terrace, Newcastle-on-Tyne.
MACKELLAR : Robert Norman Houghton [*S.* 1912]; 3 Cathkin Road, Langside, Glasgow.
MANN : Henry William [*Special*]; Chignall House, Witham, Essex.
MATTHEWS : Harold Ewart [*S.* 1906]; 300 Uttoxeter Road, Derby.
MOERDIJK : Gerard [*S.* 1911]; 137 Brecknock Road, N.W.
NEWHAM : Theodore Nelson [*S.* 1909]; 79 Sumatra Road, West Hampstead, N.W.
PATERSON : William [*S.* 1913]; 3 Hope Park Terrace, Edinburgh.
POCOCK : Percy Willmer, jun. [*S.* 1909]; The Beeches, Egham.
POWELL : Herbert Cecil [*S.* 1907]; Cheetham Hill, Melton, Stockport.
PRITCHARD : William, P.A.S.I. [*S.* 1905]; 6 Highfield Road, Rock Ferry, Cheshire.
ROGERS : Cecil Walter [*S.* 1912]; 15 Enmore Road, Putney, S.W.
RUSSELL : Robert Tor [*S.* 1909]; 11 Gray's Inn Square, W.C.
RUTTER : William Arthur [*S.* 1909]; 90 Tachbrook Street, Westminster, S.W.
SALISBURY : Stanley [*S.* 1901]; Limbrick Hall, Harpenden, Herts.
SCOTT : Theodore Gilbert [*S.* 1910]; 24 Castle Meadow, Norwich.
SMITH : Edwin [*S.* 1907]; 123 London Road, Neath, S. Wales.
STANTON : Stephen James Bridges [*Special*]; 47 Cavendish Road, Brondesbury, N.W.
TEBBS : Charles Edward [*S.* 1913]; 24 Llanthewy Road, Newport, Mon.
THOMPSON : William Harding [*S.* 1909]; 21 Earl's Court Square, Kensington, S.W.
WALTER : Robert Albert [*S.* 1911]; 46 Cavendish Road, Harringay, N.
WARNES : Claude Cornelius Tom [*Special*]; 19 Dalziel Place, Edinburgh.
WOODWARD : Frank [*Special*]; 13 Southampton Street, Strand, W.C.
YETTS : Lawrence Muskett [*S.* 1911]; 45 Finsbury Pavement, E.C.

The number of failures among the relegated candidates in each subject of the Final Examination was as follows :—

A. Design	42
B. Construction—	
(1) Foundations, Walls, Roofs, &c.	25
(2) Iron and Steel	37
C. Hygiene	34
D. Properties and Uses of Building Materials	20
E. The Ordinary Practice of Architecture	32
F. The Thesis	15

The Final: Alternative Problems in Design.

The Board of Architectural Education announce that the designs submitted by the following students who are qualifying for the Final Examination have been approved:—

SUBJECT XII.

(*a*) DESIGN FOR A LIGHTHOUSE.

Addey: F. A.
Binnie: W. B.
Callander: G. W.
Carreras: L. E.
Davidson: A. E.
Davies: E. C.
Dicksee: H.
Elsworth: L. A.
Grant: J. D.
Howard: S. B.
Leigh: H. G.
Preston: E. C.
Robinson: N. S.
Whitehead: H. M.
Wood: A. J.
Weekes: N. B.
Bagenal: H.
Burnett: A. S.
Carey: J.
Cosser: G. A.
Davidson: G.
Davies: H. F.
Duncan: R. A.
Fowell: J. C.
Hooper: A. F.
Langdell: G. A.
Philp: R. H.
Robertson: A. W.
Silcock: A.
Williamson: F.
Wallace: R. S.

(*b*) DESIGN FOR A GOLF CLUB HOUSE.

Adams: P. J.
Andrew: H.
Blackford: J.
Cawkwell: R.
Cheek: C. C.
Clarke: J. A.
Darley: F. A.
Dotto: A. L.
Dyson: V.
Farrer: J. C.
Ford: L. S.
Goodwin: H. T.
Head: G. L.
Jepson: H. N.
Matthews: J. B.
Moss: D. J.
Rowntree: C.
Sanders: T. A.
Shewen: Miss Mary
Terrell: W. E. W.
Threadgold: R. A.
Triscott: H. S.
Watt: J. D.
Wilson: J. F.
Allison: W.
Aslin: C. H.
Barrowcliff: A. M.
Brueton: B. F.
Charles: H. L.
Clark: C. J. K.
Crossland: H. E.
Dickinson: J.
Eaton: G. M.
Fincham: E.
Garrett: S. C.
Gray: G. H.
Jenkins: T. T.
Luyken: H. M.
Lone: R.
Maxwell: A. E.
Pennington: W. F.
Rubery: S.
Shattock: L. H.
Soper: S. G.
Thorpe: A.
Toothill: J. C. P.
Walker: D. W.
Whitehead: P.
Wright: C. R.

Licentiates and the Fellowship.

The following Licentiates have passed the Examination qualifying for candidature as Fellows:—

BUCKLAND: Herbert Tudor; Norwich Union Chambers, Birmingham.

CLAY: George Felix Neville; Board of Education, Whitehall, S.W.

DEACON: Basil Charlton; 21 Market Hill, Luton, Bedfordshire.

HAYWOOD-FARMER: Edward; Norwich Union Chambers, Birmingham.

FOSS: John Henry Beart; 16 Great Marlborough Street, W.

HALLEY: James Mitchell White; 9 Bedford Row, W.C.

LINES: Roland Walter; Macdougal Avenue, Edmonton, Alberta, Canada.

COMPETITIONS.

Barnsley Town Hall Competition.

Members and Licentiates of the Royal Institute of British Architects are advised that the conditions of the above Competition are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions, and that the Competitions Committee are in correspondence with the promoters with a view to their amendment.

IAN MACALISTER,
Secretary R.I.B.A.

MINUTES. VI.

At the Sixth General Meeting (Business) of the Session 1913–1914, held Monday, 26th January 1914, at 8 p.m.—Present: Mr. Reginald Blomfield, A.R.A., *President*, in the Chair; 23 Fellows (including 9 members of the Council), 52 Associates (including 1 member of the Council), 3 Licentiates, 1 Hon. Associate, 35 Students, and numerous visitors:

The Minutes of the Meeting held 12th January [JOURNAL, 17th Jan., p. 176] being brought forward for confirmation, the 5th paragraph from the end was corrected so as to read: "On the motion of Mr. Edward Greenop [*F.*], paragraph (*b*) of Clause 1 was amended so as to read as follows: '(*b*) The fees for any additional works executed under the original contract or order are charged at the percentage rate fixed by the graduated scale applicable thereto.'" The Minutes were then confirmed and signed as correct.

The decease was announced of Walter Liberty Vernon, Government Architect of Sydney, New South Wales, elected Fellow 1886; and Charles Valentine Hunter, elected Associate 1879, resigned 1912.

The following Associates attending for the first time since their election were formally admitted by the President:—Francis Pickmere, David John Chisholm, Thomas Spencer, Richard Glazier.

Colonel Sir Herbert Jekyll, K.C.M.G., having read a Paper on LONDON TRAFFIC PROBLEMS, a discussion ensued, and on the motion of Colonel Hellard, C.B., seconded by Mr. Raymond Unwin [*F.*], a vote of thanks was passed to him by acclamation.

A letter was read from Sir Aston Webb, K.C.V.O., C.B., R.A. [*F.*], suggesting the passing by the Meeting of a Resolution embodying Sir Herbert Jekyll's proposition [see p. 186] of a Central Authority to deal with arterial roads; and on the motion of Mr. Raymond Unwin [*F.*], seconded by Mr. George Hubbard, F.S.A., *Vice-President*, it was unanimously

RESOLVED, That this Meeting of the Royal Institute of British Architects is of opinion that a Central Authority is urgently required, with power, first, to lay down the lines of arterial roads; and, secondly, to require Local Authorities to make their schemes conform to prescribed lines which happen to traverse their areas.

It was further resolved that this Resolution be forwarded to the authorities concerned.

The Deed of Award of Prizes and Studentships 1914, made by the Council under the Common Seal, was read by the Secretary, and the sealed envelopes bearing the mottoes of the winners were opened and the names declared.

The proceedings then closed and the meeting terminated at 10.20 p.m.